

**Regina's Community  
Greenhouse Gas Emission Reduction  
Action Plan**

**Developed by the:**



**DRAFT**  
**December 2003**

## EXECUTIVE SUMMARY

There remains little doubt that Climate Change is a reality and that a significant portion of the responsibility for this change lies with our use of fossil fuels and an increase in the level of greenhouse gases, primarily carbon dioxide, in the atmosphere. There is also no question that this is a complex issue to deal with and that visible signs of success in reducing the rate of climate change will be very difficult to identify. The City of Regina Council believes, however, that the City and Community must take action to reduce its emissions and seek to become part of a growing movement globally to reduce the rate of change in the climate.

The administration of the City has successfully implemented a program to reduce the emissions of greenhouse gases generated by City operations and will continue to take action. In order to engage the community, City Council created the Green Ribbon Community Climate Change Advisory Committee (the Green Ribbon Committee) in 2000. This Committee, comprised of members of the community with a desire to see residents of Regina take action to reduce their emissions, was mandated to develop recommendations to Council for an action plan to engage the community. This report expresses the deliberations and consultations of that committee.

The Green Ribbon Committee, in order to provide definition to its deliberations, developed a mission statement based on its mandate from City Council:

**Promote an awareness of climate change and develop a plan of action with the citizens of Regina to reduce greenhouse gas emissions for the benefit of our community**

From this, a set of key messages were set to guide the development of a list of recommendations for City Council to help the community take action to reduce emissions:

*Climate change will affect our lives and lifestyles.*

*Reducing greenhouse gas emissions will help our health, the economy, the environment, the community and our future.*

*The community of Regina has a well-founded reputation for being an environmentally concerned community; this leadership should continue as we respond to climate change.*

*Addressing climate change requires the effort of individuals at home, at work, and at recreation.*

*Individuals do make a difference.*

The Green Ribbon Committee developed an action plan and recommendations for implementing this action plan and submitted the plan to City Council for approval. The basis of this plan calls for the Green Ribbon Committee to continue to undertake a number of actions including:

- Continue consultation with the community to further enrich the plan
- Undertake action to increase awareness in the community of the issue of climate change and the reasons for reducing emissions
- Develop commitment within the community to take action to reduce emissions from those listed or others that come about through discussion and consultation
- Develop champions within the community to encourage others to take action
- Make use of all avenues for information and support for this activity
- Monitor the effectiveness of emissions reduction activities and report back to Council
- Making Regina a national leader in community efforts to combat climate change

The members of the Green Ribbon Committee are committed to increasing the effort within the community to reduce its emissions of greenhouse gases and make Regina a better place to live.

## 1. BACKGROUND

Created in 2000 under the authority of Regina City Council, the Green Ribbon Community Climate Change Advisory Committee (GRC) was mandated to develop a plan to guide our community toward achieving an overall reduction of greenhouse gas emissions to 6% below 1990 levels by 2012. While the City Administration is committed to reducing its operational greenhouse gas we need to encourage our community to also commit to this target.

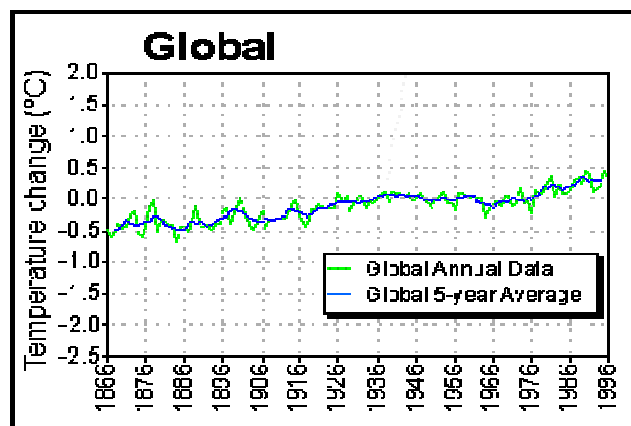
The GRC was given the following Terms of Reference by City Council:

- Investigate options to reduce community greenhouse gas emissions within the City
- Determine barriers to actions that reduce greenhouse gas emissions within the Regina community and recommend actions to overcome such barriers
- Create a Community Greenhouse Gas Emissions Reduction Action Plan to ensure our community reaches the City's goal
- Prioritize the Action Plan to target the highest benefit areas  
Develop a strategy to implement the Action Plan
- Consult with the public through focus groups, briefs, and public meetings
- Have working groups recommend how to implement the Action Plan
- Monitor the results of the Action Plan implementation and revise as necessary
- Recommend projects for the *Cool Down The City* program

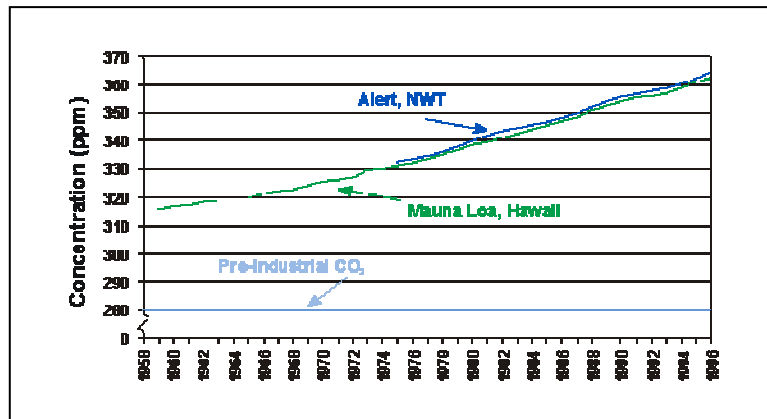
The Green Ribbon Committee is comprised of one member of City Council and seventeen concerned citizens sanctioned by City Council. The Mayor is an ex-officio member of the Committee.

### The Need for a Local Greenhouse Gas Reduction Strategy

Studies show that global temperature and greenhouse gas levels have moved together over the last 150,000 years. Since the dawn of the Industrial Revolution, the concentration of greenhouse gas, mainly carbon dioxide, has increased almost 30%, principally due to the burning of fossil fuels, land-use changes and use of fertilizers. Thus we can expect further temperature increases resulting from our changed industrial practices over the past 150 years.



**Figure 1: Average global temperature has increased by approximately 0.5°C over the past century (Environment Canada).**



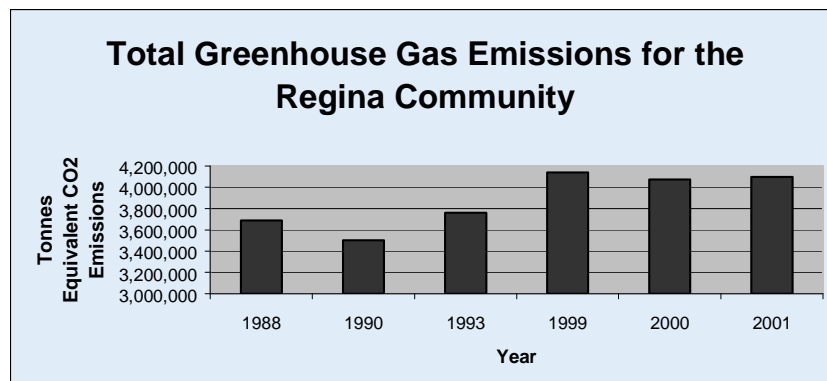
**Figure 2: Scientists believe the present-day concentration of carbon dioxide of approximately 360 ppm to be the highest in the last 220 000 years, based on glacial ice core analyses (Environment Canada).**

What does this mean for Regina? Here, the increased temperature will be primarily felt through shorter cold spells in winter and longer hot periods in the summer.

A side effect of increased temperatures will be less moisture availability. As such, people in Regina and the surrounding region will have less water available for recreational activities and watering yards and parks. Further, decreased water may result in a deterioration of water quality, forcing an increase in treatment costs.

Warmer average temperatures may reduce energy-use in winter, but increase summer energy requirements for water and air-conditioning use. So while at first glance, Reginaans accustomed to living in extremely cold winter temperatures may see global warming as a benefit, we must consider the adverse effects on our water supply, energy consumption, health and safety during hot, dry spells. It's time to remember our global responsibilities, and lead the way in reducing the impact of climate change – on ourselves, and our world.

Our City and some of our businesses have already started to understand climate change and its potential effects on our community. Our roadways may deteriorate more quickly, extreme weather events like drought, floods, high winds and wet snowfall could become more frequent and require intricate and expensive contingency plans. We may even need to consider new plant species for our parks and boulevards. Avoiding such high cost effects benefits everyone in our community.

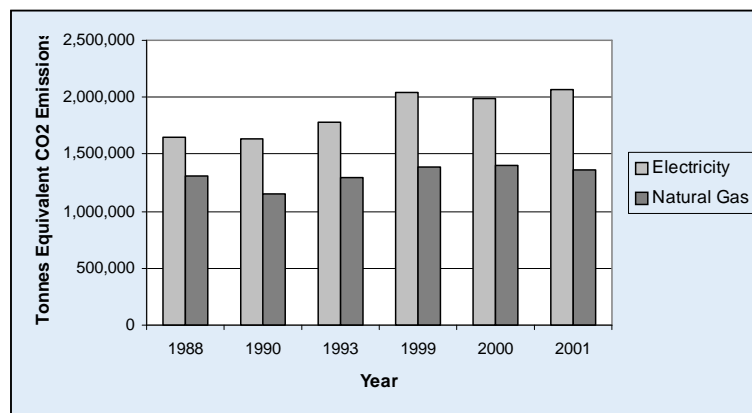


**Figure 3: Community greenhouse gas emissions in Regina were about 4.1 million tonnes<sup>1</sup> in 2001, compared to 3.5 million tonnes in 1990. This means that emissions are approximately 22 tonnes per person. To meet City Council’s target, the Regina community will need to reduce its emissions by 6% of 1990 levels by 2012, a reduction of 210,000 tonnes of greenhouse gas emissions. In other words, by 2012 community emissions will have to be 3.3 million tonnes.**

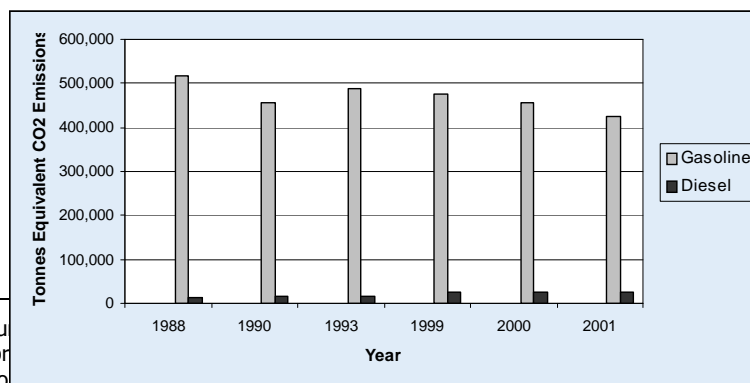
Thus there is an inherent need to undertake local actions that contribute to a global solution. Because every citizen, every business, and every vehicle uses energy that contributes to climate change, it is everyone’s responsibility to take action. Reginans can be proud; Regina was one of the first three municipalities in Canada to set a greenhouse gas emission reduction target in 1990. The City has made great strides in reducing its operational emissions. Now, it’s time for individuals to concentrate on demonstrating this leadership in the community.

Like most municipalities, as illustrated in Figure 3, energy use in the Regina community has been increasing. In fact, between the baseline year of 1990 and the present, greenhouse gas emissions in Regina have increased by 17 per cent. Therefore, although City Council set the community’s goal to reduce emissions by 6 per cent, by 2012 we will actually need to reduce greenhouse gas emissions by at least 23 per cent of 1990 levels to meet the set target.

While emission reduction is in itself a good thing, there are individual benefits as well. Figures 4 and 5 show energy consumption in our community and the resulting emissions levels. Not only will increasing energy efficiency reduce our emissions, but also decrease our costs. Converting to renewable forms of energy is another way we can reduce emissions. Overall, as our environment becomes healthier so too will our personal lifestyles, and vice versa.



**Figure 4: Regina community electricity and natural gas trends since 1988.**



<sup>1</sup> The Regina community greenhouse gas emissions are calculated using the Climate Protection GHG Emission Software provided by the Energy and SaskPower, and vehicle fuelling station.

**Figure 5: Regina community transportation fuel trends over time.**

## **EVERYONE BENEFITS**

Our greenhouse gas emission strategy has a threefold benefit to our entire community:

- Environmental: to reduce the impacts of climate change for a more sustainable environment
- Economic: to sustain economic growth over the longer term
- Social: to sustain a healthy population and quality of life

Reducing greenhouse gas emissions in Regina is an achievable goal that does more than just reduce our impact on climate change: it improves the quality of our community.

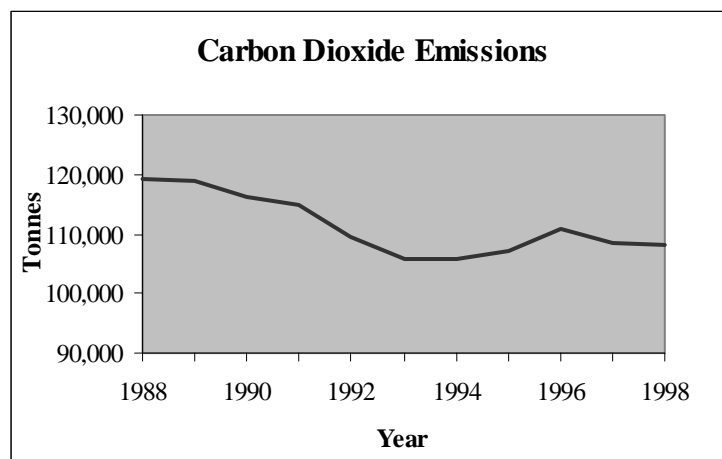
The City of Regina is proud to lead reduction goals set by City Council, the entire community needs to work together to reduce emissions.

Corporately, City Administration has made significant strides toward reaching the corporate target set by City Council. Specifically this target states that the City of Regina will reduce its greenhouse gas emissions by 20% of 1990 levels by 2005, and then further reduce emissions 1% each year thereafter until 2012.

To meet this goal, the City has:

- retrofitted its facilities
- made street lighting more energy efficient and
- converted over 70 of its vehicles to natural gas.

By taking these actions, the City demonstrates leadership to the community by striving to reduce its own energy use and emissions (See Figure 6). The City is also a member of a number of national and international groups dedicated to reducing emissions and providing a healthy living environment.



**Figure 6: City of Regina Corporate Carbon Dioxide Emissions since 1988.**

## **OUR RESIDENTS CAN BE LEADERS TOO**

The community of Regina can be a leader too. To achieve community goals, the Green Ribbon Committee has developed a Greenhouse Gas Emission Reduction Action Plan for the community, in consultation with the community. This Action Plan is based on a Mission Statement developed by the Green Ribbon Committee.

### **Mission Statement**

**Promote an awareness of climate change and develop a plan of action with the citizens of Regina to reduce greenhouse gas emissions for the benefit of our community**

## **OUR KEY MESSAGES**

To ensure that actions promoted within this action plan are consistent with the Mission Statement and the needs of the community, the Green Ribbon Committee has developed the following key messages. These form the basis for all proposed actions, providing a measurement for community success in achieving the goals of reduced emissions and a healthier community.

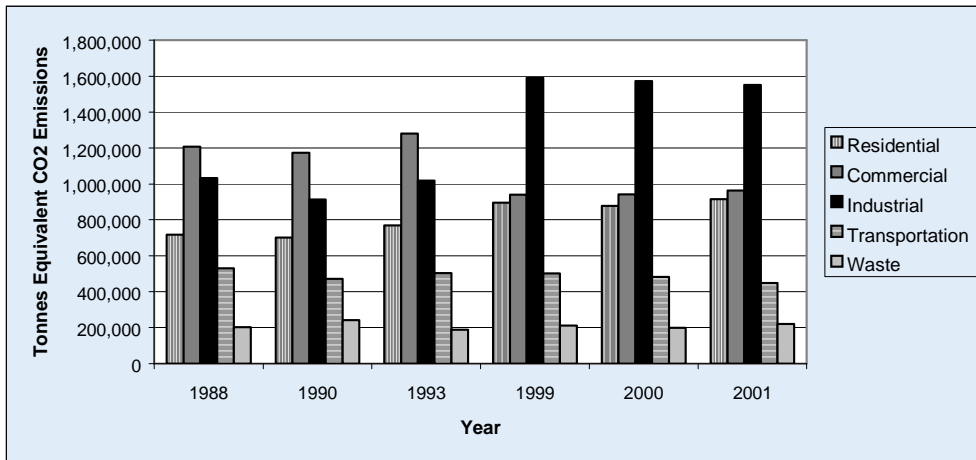
- **Climate change will affect our lives and lifestyles.**
- **Reducing greenhouse gas emissions will help our health, the economy, the environment, the community and our future.**
- **The community of Regina can feel proud of its well-founded reputation for being an environmentally concerned community; this leadership should continue as we respond to climate change.**
- **Addressing climate change requires the effort of individuals at home, at work, and at recreation.**
- **Individuals do make a difference.**

## **DELIVERING THE KEY MESSAGES**

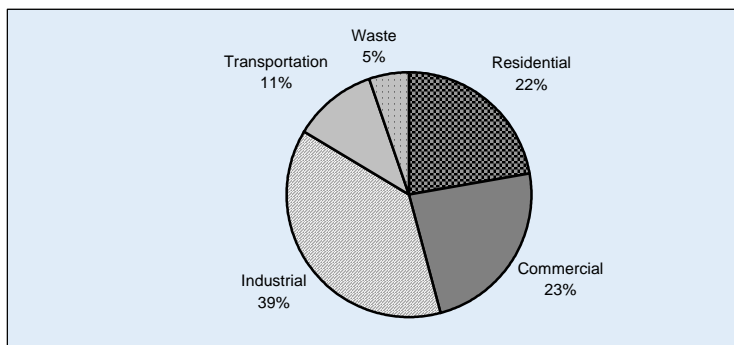
- To better understand the requirements of these action plan components, the GRC struck a number of subcommittees, tasked with developing segments of the action plan:
  - Education and Communications
  - Residential
  - Industrial, Commercial and Institutional
  - Transportation

This document integrates the sub-plans developed by these Subcommittees into a single Action Plan. The sectors addressed by the Subcommittees were agreed to be the key areas to be addressed in Regina, based on the energy consumption within each. Each Subcommittee

developed its recommendations based on the measures it researched to be the most effective in reducing GHG emissions, as well as being the most cost effective.



**Figure 7: Regina community greenhouse gas emissions by sector since 1988.**



**Figure 8: Regina community emissions by source for the year 2001.**

## **OUR PLAN IN SUMMARY**

Each of the Subcommittees developed detailed action plans for reducing GHG emissions in their sector. These detailed plans are summarized here and provided in full in the attached appendices. Some of the recommendations will be quick to implement, while others may take longer to implement.

### **A.) EDUCATION AND COMMUNICATION**

#### **Goal**

The focus of this Subcommittee is to develop an education strategy and communication plan that leads and supports reducing greenhouse gas emissions within the City of Regina community. The goal is to move individuals and the community through a “model” that helps people become AWARE of the issues of climate change while raising their UNDERSTANDING and CONCERN about these issues. The next phase of the model encourages them to develop a COMMITMENT and finally take ACTIONS to reduce greenhouse gas emissions in the community.

#### **Key Components**

The strategy and plans have formed around the following key components:

##### **Awareness of climate change:**

Climate change is real. Raising awareness of the issue involves showing credible information that informs community groups and leaders about what they can do to successfully reduce greenhouse gas emissions.

The strategy towards awareness will be developed and promoted through a variety of materials, websites, meetings and workshops.

The intent is to create a community that is well informed so that individuals and the community can make responsible choices to improve the health of the community.

##### **Implementation**

The goal is to provide individuals and businesses with ways to reduce emissions of greenhouse gases, therefore mitigating the impacts on our environment. It is important to focus on how these actions are rewarding financially, environmentally, and in maintaining and improving the health of our community.

The Subcommittee will encourage ‘champions’ within the community who will promote and motivate members of the community, education and business towards the goals and actions presented in the plan.

Packages promoting “Awareness to Action” will be developed and distributed to these ‘champions’ to assist them with their promotional and motivational campaigns.

With the development of a review program, progress and successes of the promotion and implementation of actions will be monitored and measured. Therefore, moving from AWARENESS to ACTION can be reviewed and adapted to meet the goals of the action plan.

A series of five recommendations have been developed to assist members of the community to move from the AWARENESS of climate change issues to taking ACTION to reduce greenhouse gas emissions in our community.

### **Recommendations**

- That the City of Regina promote awareness among its employees of the importance of the climate change issue to the City and provide access to information to those employees who deal with the public
- That organizations participating on the Green Ribbon Committee promote awareness among employees within those organizations of the importance of the climate change issue
- That the Green Ribbon Committee collaborate with and support the Office of Energy Conservation
- That the City remain engaged with and support fully the research and actions of *Communities of Tomorrow*
- That the Green Ribbon Committee support the continued operation of Climate Change Saskatchewan in the provision of information of climate Change to the community
- That the assistance of community leaders is sought to help disseminate the message of climate change response.
- That the City designate a person within the City Administration to remain informed about climate change issues and activities to reduce emissions as the contact point within the City for requests for information from citizens and businesses.
- That City Councillors assist in promoting the message of the importance of responding to climate change within Regina.
- The City, participating organizations on the Committee and others in the community increase the promotion of the *Cool Down The City* program as a means of providing the information and incentive for citizens and businesses to take action on climate change.
- That the Green Ribbon Committee prepare an "awareness package" for community leaders and that the City assist in the distribution and promotion of these packages.

## **B.) RESIDENTIAL**

### **Goal**

To establish a mechanism to educate the community of Regina about the climate change issue, gather support for community action, get individuals engaged in efforts to reduce greenhouse gas emissions in their homes, and leverage support (financial and technical) from provincial and federal governments.

### **Overall Objectives:**

- Set an emissions target for the residential sector in Regina and a timeline for achieving it
- Identify cost-sharing opportunities for groups i.e.: federal, provincial, municipal, private groups
- Modify existing provincial programs to permit support for climate change initiatives
- Establish a Climate Change Initiatives Fund for the purpose of supporting the initiatives that are undertaken locally
- Develop policy, fiscal or regulatory measures to encourage or require reduced emissions as may be prudent, effective and appropriate
- Support programs that deliver public information and education

- Establish more effective coordinating mechanisms with all levels of government to ensure an effective and efficient approach to achieving climate change objectives

### **Targets**

- **Initial** target of one tonne per person reduction by 2012 (approx. 196,000 tonnes)
- **Eventual** target of 330,000 tonnes by 2012 based on natural gas usage going down by 0.5% per year and electricity usage or emissions intensity going up by less than 1.5% per year
- **Desired** target of 255,000 tonnes by 2012 based on natural gas usage remaining stable and electricity usage or emission intensity going down substantially (reduction of at least 1.0% per year)

### **Recommendations**

- Establish a Program where all households in Regina have access to affordable or complimentary high efficient showerheads.
- Encourage vehicle owners who use block heaters and/or interior car warmers to install timers.
- Promote the installation of high efficient lighting in all new homes and the replacement of low efficient lighting in existing housing.
- Provide incentives for the community to upgrade their existing homes thermostats to programmable thermostats.
- Advance the goal of eliminating pilot lights on water heaters through manufacturers and suppliers. In addition, encourage the community to renovate existing hot water heaters.
- Encourage all homeowners to complete an EnerGuide Audit on their home and understand the value of making the necessary renovations to ensure their homes maximize energy efficiency.
- Create a Residential Greenhouse Gas Reduction Handbook, which will provide residents with a source of information on greenhouse gas reduction opportunities.

These seven projects are recommended first, as they offer the least-cost alternatives to reducing emissions. Once these are implemented successfully, we recommend that the City implement other projects that may cost more initially, but offer more effective greenhouse gas emission reductions. All suggested projects and their net present value rating are outlined in the Residential Appendix.

## **C.) INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL**

### **Goal**

This Subcommittee addressed the design of actions, which could be taken in the Industrial, Commercial, and Institutional sectors to enable Regina to meet its greenhouse gas emissions reduction target.

### **Key Components**

Unlimited participation with sectoral groups, all levels of government and individuals is built into the action matrix.

While the implementation of many of the proposed actions involves others, the main catalyst for success will have to come from the City of Regina.

## Recommendations

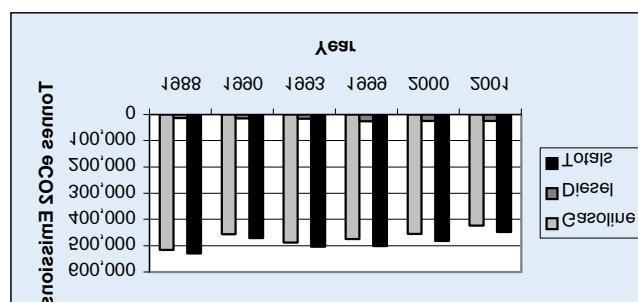
- Prepare two data bases for use in conducting energy and waste conservation in commercial, industrial and institutional buildings. One being people, and the other being building within the categories
- Track the amount of greenhouse gas emissions that are being emitted to ensure there continues to be value in the programs that are being offered
- Educate people (including the real estate industry) to recognize the value of energy retrofits, even when the payback periods are long
- Encourage the development of economic incentives to encourage longer payback projects to be conducted, recognizing that it is often these projects that mean real improvement
- Lobby the provincial government to change the municipal assessor's manual to take greenhouse gas emissions/energy efficiency into account
- Encourage community leaders to lead by example by implementing some of the recommended actions of the Green Ribbon Committee
- Bundle small ICI sector businesses to qualify for performance contracting
- Change the City's Assessment procedure to exempt energy conservation retrofits from assessment increases
- Establish wide-use central heat facilities as a District Heating Item
- Provide information on energy efficiency to building owners

## **D.) TRANSPORTATION**

### Goal

A number of actions have been developed to address four key issues, including reducing commuter traffic to high traffic density areas, improved traffic efficiency, improved vehicle efficiency, and climate change initiative funding. These recommended actions will have varying degrees of impact, and certainly have varying degrees of financial commitment associated with them for implementation.

Unrelated to the traffic issues at hand to reduce greenhouse gas emissions, but responsible in part for the amount emitted, is the growing geographical dimensions of the city, and the desire by people working in the city to live outside the boundaries of the city. The City will need to focus on containing its size and focus on making it more attractive for people to live closer to their workplace.



**Figure 14: Emissions from gasoline and diesel consumption in transportation sector over time.**

### Key Components

### **Reducing Commuter Traffic to the Downtown Business District**

Single passenger commuter traffic to the Downtown Business District (estimated to be 55,000 vehicle trips per day) represents the largest single contribution to GHG emissions from vehicular use in Regina. A 10% reduction in the number of commuter trips to the Downtown Business District would contribute significantly to an overall reduction in GHG emissions in the City of Regina.

### **Improving Traffic Efficiency**

Traffic efficiency plays a significant role in green house gas emissions. Vehicles that are not moving but have their engines running, are contributing to GHG emissions in the City. Reducing idling times for warming up, stopping at traffic lights etc. will move people and goods more efficiently and thus reduce GGE.

### **Developing a Direct Route Commuter Bus System**

To reduce GHG emissions from heavy commuter traffic moving into our downtown business core, we need direct run, peak period bus service from outlying collection areas to the core business area.

### **Improving Vehicle Efficiency**

Vehicle efficiency plays a significant role in green house gas emissions. Improperly tuned and maintained vehicles can substantively increase green house gas emissions. Environment Canada estimates that there are 10,000 to 12,000 older, poorly maintained vehicles in the City of Regina. These vehicles account for as much as 16% of the GHG emissions from the transportation sector or over 9000 tonnes of emissions. By reducing these emissions by one-third, the entire GHG target reductions for the transportation sector could be reached.

### **Generating Revenue to Fund Climate Change Initiatives**

Several of the proposed initiatives overall have a cost associated with them. Self-generating these funds through “green” initiatives helps to make the recommendations viable. As more climate change initiatives are identified (and the corresponding costs increase), the number and/or rate for each revenue-generating idea can be adjusted to increase the level of revenue.

### **Recommendations**

- Complete a survey directed at the downtown work force to evaluate and assess commuter traffic patterns and the potential to change those patterns
- Establish a Regina parking authority complete with a City-funded administrative position to coordinate activities
- Modify transit services in the downtown business district
- Modify the current policies on parking requirements for new development in the downtown business district
- Adjust property tax assessed on surface parking in the downtown zone
- Promote alternate means of transportation in the downtown business zone and endorse any expansion plans for a bicycle lane network and secure bicycle parking in the downtown core area
- Develop a pilot project for a direct route commuter bus system in northwest Regina. By replacing single occupant vehicles with high occupancy transit, GHG emissions will be reduced and transportation efficiency increased
- Develop a program where all vehicles registered to a Regina address would be subject to mandatory emission testing and repair of deficiencies
- Apply a vehicle ‘green’ fee to the vehicles registered within the city

## **2. ROLE OF GREEN RIBBON COMMITTEE IN IMPLEMENTING THE ACTION PLAN**

What is the future role of the Green Ribbon Committee? The current plan is but a first step down the road of reducing emissions within the community and maintaining the commitment to continued reductions. For the future, the Committee will have a number of roles if Regina is to continue to be known as an environmentally friendly and progressive community.

The Committee will continue to consult with the community and to refine the plan that it has submitted to City Council as the starting point for this consultation. This plan is seen as a start only and that the community will play an ever increasing role in helping the Green Ribbon Committee to develop options and to encourage the implementation of opportunities.

The Committee will continue to be the focal point for the community as it seeks to develop ways of reducing greenhouse gas emissions. It will encourage action. It will provide the information necessary for members of the community to take action. It will also seek to gain support from the business community to make the changes necessary to have Regina as a leader in Canada and Saskatchewan.

The Committee will support actions taken elsewhere to increase Regina's visibility as a progressive, environmentally friendly community. This includes efforts to develop eco-industrialism in the community, to support the development of the Communities of Tomorrow initiative and the government initiative to create the Office of Energy Conservation. The Committee will also support the growth of the "Cool Down the City" program as a means of encouraging community uptake of ideas. This will include expanding the mandate of the program and increasing its visibility within the community.

The Committee will seek support for activities within the community from all avenues available to it. This will include federal, provincial, internal and other means of supporting community action to reduce emissions.

The Committee will report annually to the City Council and the community on progress that has been made in reducing emissions in the community.

## **3. CONCLUSIONS AND RECOMMENDATIONS**

The members of the Green Ribbon Committee are all members of the community and are all dedicated to seeing a reduction in the greenhouse gas emissions of the community. Many have already taken the initiative to reduce their own emissions, including the purchase of energy efficient appliances using the *Energuide* labels as a guide to the level of energy efficiency of those appliances. Other actions include the purchase of a hybrid car for efficient in-town driving, utilizing non-emitting forms of transportation such as cycling, home energy improvements, and many other actions that demonstrate a commitment to emissions reduction. The members of the committee wish to see these actions and others replicated across the community and through the business sector to make Regina a more environmentally sustainable place to live and work.

This document, prepared by members of the community, is designed to provide advice on getting started on community-wide action to reduce emissions of greenhouse gases. It is an 'evergreen' document that will be upgraded and refined with time. It will provide the starting point for

continued discussion and consultation with the citizens of Regina. The committee looks forward to getting more feedback from the community and to working with groups and individuals to implement the actions outlined in this document.

The basic recommendations coming out of the deliberations of the Committee are simple:

- The Green Ribbon Committee should continue to implement the recommendations outlined in this report to City Council
- That actions to increase awareness of the issue in the community and to reduce emissions generated by the community begin immediately
- That the Committee undertake further consultation with the community using this report as a starting point for discussion and feedback
- That the Committee monitor activity to reduce emissions within the community and report on a regular basis to City Council the progress that has been made
- The Committee should make use of available resources and identify new resources to help in its activity within the community
- That members of the Committee seek to become champions within their own organizations and make these organizations leaders within the community

In short, the Committee should be dedicated to helping Regina continue a tradition of being environmentally conscious and active. Regina can be both economically successful and an environmentally friendly community, providing a high quality of life to its citizens while demonstrating national and international leadership.

## **APPENDIX 1      EDUCATION AND COMMUNICATION PLAN**

### **BACKGROUND**

The Education and Communication Subcommittee was tasked by the Green Ribbon Committee to develop the communication plan and education strategy for the public. This is consistent with City Council recognition that there must be an increase in awareness of the issue within all sectors of Regina society. A positive response to climate change will help make Regina a more sustainable community. While there are many definitions of sustainability, in this context the goal is to help make the city less energy-intensive while continuing to improve quality of life and economic circumstances.

Our goal is to create a community that is well informed about climate change and thus able to make globally responsible choices. This portion of the Action Plan discusses the actions recommended to raise awareness of Climate Change and its impacts, and the communication of the actions deemed important by the other subcommittees.

### **COMMUNICATING CLIMATE CHANGE CONCERNS**

Climate change is a complex issue. The very complexity of the issue makes it difficult to understand, and precipitates controversy. It is also difficult to discern change over short periods of time (over a five-year period, for example) when normal variability overwhelms the climate change signal.

The messages that need to be clearly communicated are:

- climate change is real and the effects are long-term
- the atmosphere may reach a climate threshold, after which change will occur very rapidly, making adaptation difficult
- there are risks to no action taken to reduce the effects of climate change.

The mechanisms available to the Green Ribbon Committee to bring climate change to the community's attention include:

- promoting credible information sources like Climate Change Saskatchewan
- preparing and utilizing written and other material on climate change
- including the climate change message in related City communications such as those related to decreasing water utilization
- responding to questions and requests for information from the community
- informing community groups and community leaders.

To minimize costs, the Green Ribbon Committee will promote the use of credible information sources. Where gaps exist, the Committee will produce its own awareness materials, which the City will have access to. The City web page and other City information mechanisms will be used to inform the community at large.

The Green Ribbon Committee will also seek to inform and educate the City's corporate and community leaders of the importance of climate change and the actions that they and other individuals can take to combat this environmental problem. A demonstrable corporate commitment to reducing greenhouse gas emissions will be critical to the success of any plan introduced to the City.

### **RAISING AWARENESS**

Taking action to reduce greenhouse gas emissions and mitigate some of the impacts can be rewarding financially, environmentally and in improved personal health.

In 1999, the City of Regina approved a program called “Cool Down The City,” designed to encourage citizens to find ways to reduce their GGE. The Green Ribbon Committee has adopted this program and will use it to deliver its message and promote action to reduce emissions.

Expanding on the targets of the Cool Down The City program, the GRC will promote its actions to all segments of Regina society. Success will be determined by the community knowledge of the Cool Down The City program and its effectiveness in getting people to adopt the actions it promotes. The following appendices, prepared by the Green Ribbon Committee, provide a recommended action plan for implementation by the community and its citizens.

The province has created the Office of Energy Conservation to assist the citizens of the province in their efforts to reduce the use of fossil energy. This Office will provide Regina with an effective means of promoting technologies and methods for reducing greenhouse gas emissions.

The province and federal government have joined forces to develop Climate Change Saskatchewan. This organization is designed to provide the citizens of the province with a credible and balanced source of information on climate change.

### **ACTIONS TO INCREASE AWARENESS**

The City will make use of current sources of credible and balanced information on the impacts of climate change to the city and its citizens. This will include:

- making available web-site addresses recommended by the GRC
- providing access to written material
- providing city employees access to climate change information
- providing information on the City Page and web-site
- GRC members acting as champions within their organizations to increase awareness Climate Change and recommended actions to reduce emissions.

Within City Administration, the Sustainable Communities Co-ordinator is responsible for handling requests for information on climate change and actions that can be taken to reduce emissions. The Coordinator uses resources such as the Office of Energy Conservation (Provincial Government), and Climate Change Saskatchewan, which provides such services as a Speakers' Bureau.

In addition, the Green Ribbon Committee will work closely with the City to develop opportunities to deliver the message of the importance of responding to climate change to participant organizations and targeted groups within the city. Such groups would include the senior executives of major corporations, associations, government departments, etc. to ensure an awareness and commitment to corporate action. Community groups will also be informed of available resources and encouraged to increase awareness and action within the communities those groups represent. This communication will be best-managed with the cooperation and support of City Council members and other informed community members.

**Recommendations:**

- That the City of Regina promote awareness among its employees of the importance of the climate change issue to the City and provide access to information to those employees who deal with the public.
- That organizations participating on the Green Ribbon Committee promote awareness among employees within those organizations of the importance of the climate change issue.
- That the assistance of community leaders be sought to disseminate the message of climate change response.
- That City Councillors assist in promoting the message of the importance of responding to climate change within Regina.
- That the City and other participating organizations on the Green Ribbon Committee, increase the promotion of the Cool Down the City program as an information and outreach to citizens and local business to take action on climate change.

**ACTIONS TO PROMOTE IMPLEMENTATION**

Through its subcommittees, the Green Ribbon Committee has developed a list of recommendations for the City, participating organizations on the Green Ribbon Committee, and individuals in our community who can influence GGE reduction by all sectors of the Regina community. These recommendations are listed in succeeding appendices.

To ensure effective promotion of these actions, it is important to motivate businesses and individuals to take action and remain committed to their actions. This will mean demonstrating the importance of climate change and the benefits of responding, as well as developing pride in the city. In this regard, it will be important to renew the promotion of the *Cool Down The City* program.

It will also be important to make key community members ‘champions’ of the promotion of action. These leaders include citizens on community associations, business leaders, school teachers, media representatives, politicians etc. Awareness packages should be prepared for these champions and a forum is provided to ensure any questions they may have are answered.

**SUPPORTIVE ACTIONS****Recommendations:**

- That the City designate a person within the City Administration to remain informed about climate change issues and activities to reduce emissions. This person would be the contact for requests for information from citizens and local business.
- That the Green Ribbon Committee prepares an ‘Awareness to Action’ package for community leaders that can be promoted and distributed by the City and other organizations participating on the Committee.

The City of Regina and organizations participating on this Committee should strongly support current and proposed activities that will lead to a city that is responsible and active in its support of emissions reductions and sustainability. This includes advertising and support for the new Office of Energy Conservation established by the provincial government. This office, housed at the Saskatchewan Research Council will benefit the development and promotion of opportunities for city residents and businesses to reduce their emissions.

The City of Regina, in cooperation with the University and the National Research Council, supports the Communities of Tomorrow initiative to make Regina a sustainable community. This will entail reducing energy consumption while improving the quality of life and the economic viability of the city. Such activity and its ensuing benefits will significantly reduce emissions and help position the city as a world leader in sustainable development. This action will be further strengthened by the creation of an eco-industrial park in Regina to demonstrate the community commitment to the efficient use of resources.

**Recommendations:**

- That the Green Ribbon Committee collaborates with and supports the Office of Energy Conservation.
- That the City remains engaged with and supports fully the actions of Communities of Tomorrow.
- That the Green Ribbon Committee supports the operation of Climate Change Saskatchewan in the provision of climate change information to the community.

## **SPECIFIC ACTIONS**

In the above sections, the Education and Communications Sub-Committee recommended general actions to promote awareness of the need to take action to reduce emissions of greenhouse gases in the community. There are also several specific actions that can be undertaken to target groups within the community to promote the activities of the other sub-groups. Such actions include:

- Using existing community events like Environment Week to promote energy efficiency and conservation. This will require written materials and displays.
- Preparing materials for use in the school system, including material to fit within the curriculum and special events in which school children can participate. The **Riffel Courtyard Project** is a good example of what can be undertaken in schools to promote energy efficiency and practical learning. The project fits with the spirit and intention of our Action Plan as evidenced by comments made by Andrew Bliss and Cory Velheist of Riffel School: “We discovered that it takes extra effort to find environmentally friendly solutions; however, we are proud of what we have accomplished in our own school. If everyone puts in an effort, our environment will hopefully survive.”
- Developing events to encourage community leaders to champion GGE reduction. This may include activities such as “executive breakfasts” with the Mayor to encourage business leaders, sessions with community groups, and other promotional events. Awareness packages are required to provide community leaders with information.
- Continuing action to encourage civic pride. The community of Regina has committed in the past to ensuring an environmentally friendly city. Our community has the potential to lead the nation as a national and global leader in reducing the impacts of climate change and building a better community in the process.

## **HOW WE WILL MEASURE PROGRESS**

Success will be judged using the following evaluations:

- Periodic surveys to indicate the increased awareness by the citizens of Regina of the causes and potential impacts of climate change on the City and province
- An increase in requests for information from the City and provincial information sources about climate change
- An increase in actions to reduce the use of energy and production of greenhouse gas emissions; and
- A continued reduction in the energy intensity of activities within the City.

## **APPENDIX 2: RESIDENTIAL SUB COMMITTEE ACTION PLAN**

The following Residential Action Plan represents a synopsis of recommended actions to help the citizens of the City of Regina reduce their greenhouse gas emissions. Our plan includes:

- Overall Objectives
- Targets
- Background Information
- Selection and Ranking of Projects
- Technical/Economic Work Sheet
- Initial Seven Goals
- Specific and General Recommendations
- Appendices

### **OVERALL OBJECTIVES:**

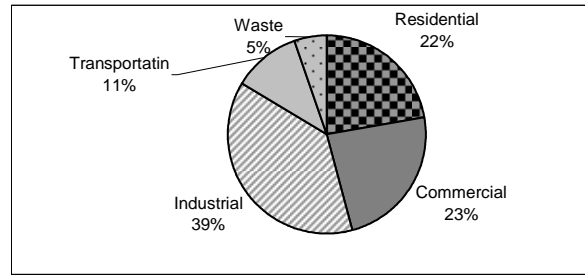
- set an emissions target for the residential sector in Regina and a timeline for achieving it
- identify cost-sharing opportunities (federal, provincial, municipal, private groups)
- modify existing provincial programs to permit support for climate change initiatives
- establish a Climate Change Initiatives Fund for the purpose of supporting the initiatives that are undertaken locally
- develop policy, fiscal or regulatory measures to encourage or require reduced emissions as may be prudent, effective and appropriate
- support programs that deliver public information and education
- establish more effective coordinating mechanisms with all levels of government to ensure an effective and efficient approach to achieving climate change objectives

### **TARGETS**

- Initial target of one tonne per person reduction by 2012 (approx 196,000 tonnes)
- Eventual target of 330,000 tonnes by 2012 based on natural gas usage going down by 0.5% per year and electricity usage or emissions intensity going up by less than 1.5% per year
- Desired target of 255,000 tonnes by 2012 based on natural gas usage remaining stable and electricity usage or emission intensity going down substantially (reduction of at least 1.0% per year)

### **TECHNICAL BACKGROUND INFORMATION**

Community greenhouse gas emissions in Regina were about 4.1 million tonnes of Carbon Dioxide equivalent (CO<sub>2</sub>e) in 2001, compared to 3.5 million tonnes in 1990. This works out to be approximately 22 tonnes per person. To meet City Council's target, the community of Regina's emissions will have to be reduced by 6% of 1990 levels by 2012. In other words, by 2012 community emissions will have to be 3.3 million tonnes if we are to meet our target.



**Figure 2.1: Community Emission**

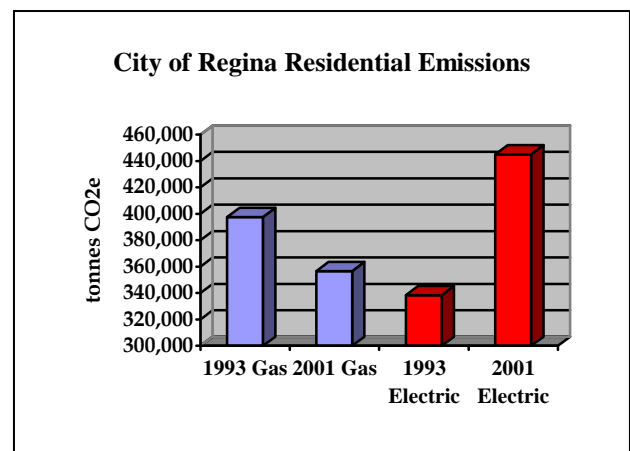
By 2001, city emissions had grown by 600,000 tonnes compared to 1990 levels. Combined with the Kyoto reduction of 6% of 1990 levels (a reduction of 210,000 tonnes), emissions were 810,000 tonnes above the target in 2001. We are currently at a point where the Regina community's emissions have **increased** by about 17% of 1990 levels, therefore in reality we need to reduce our current emissions by 23%.

In the housing sector, potential sources of emissions will continue to increase in the future. The residential housing stock will likely continue to expand by 500 homes per year. It has been estimated that a 40% reduction is needed from a business as usual (BAU) scenario in order to meet the Kyoto goals.

	1988	1990	1993	1999	2000	2001	BAU 2012	6% below 1990	2001 Shortfall	BAU 2012 Shortfall
<b>Resident'l</b>	716,992	701,807	767,681	895,178	877,908	914,467	1,169,678	659,699	<b>254,768</b>	<b>467,871</b>
<b>Commer'l</b>	1,206,210	1,172,142	1,281,132	940,621	941,950	962,099		1,101,813	<b>-139,714</b>	
<b>Industrial</b>	1,032,705	913,836	1,017,954	1,589,963	1,571,999	1,551,244		859,006	<b>692,238</b>	
<b>Transpt'n</b>	529,763	471,588	504,675	500,915	481,995	448,413		443,293	<b>5,120</b>	
<b>Waste</b>	202,130	242,062	188,632	211,277	198,609	219,708		227,538	<b>-7,830</b>	
<b>TOTAL</b>	<b>3,687,800</b>	<b>3,501,435</b>	<b>3,760,074</b>	<b>4,137,954</b>	<b>4,072,461</b>	<b>4,095,931</b>		<b>3,291,349</b>	<b>804,582</b>	

Emissions from gas consumption by the entire residential sector have gone down by 10.3% from 1993 to 2001, while emissions from electrical consumption have gone up by 31% from 1993 to 2001. The key challenge will be to constrain and subsequently reduce electrical consumption or to find cleaner sources of electrical power production.

In Regina, there is a noticeable difference in the relative weighting of emissions resulting from electrical and natural gas in different areas of the city (see below). Newer areas show a higher proportion of electrical emissions while older areas show a high proportion of natural gas emissions. Different strategies may have to be pursued in different areas of the city.



(tonnes CO2 equivalent)

	Electrical	Natural Gas	Total
938 Regina	6.77	5.89	12.66
940 Regina	6.83	5.74	12.57
1101 Regina	6.49	6.15	12.64
1102 Regina	5.92	6.49	12.41
1103 Regina	5.84	7.4	13.24
1104 Regina	5.45	6.96	12.41

## **SELECTION AND RANKING OF PROJECTS**

The Residential Subcommittee met with experts to determine the most locally relevant actions for the residential sector in Regina. Next, we conducted research on each opportunity for improvement, and presented the information in a cost-benefit analysis format. A detailed list of the technical and economic analysis of all 20 projects is appended to this section of the action plan. The actions were then rated based on their potential ease of implementation and their effect on reducing greenhouse gas emissions.

It should be noted that some of the actions that would reduce GHG emissions the most are also the most expensive. Given that the general public is relatively uninformed regarding the need to take action on climate change, this Subcommittee suggests that it would be more effective to begin engaging the public in actions by starting with easy and relatively inexpensive actions. It is hoped that after this initial engagement and once the public has a better understanding of the need to take action, they will be more receptive to taking on bigger projects that have longer payback periods, but that also have a bigger impact on reducing emissions.

The Subcommittee chose seven “early action” projects and developed a list of detailed actions that will be required for each project. These initial seven projects are discussed in the next few pages.

The following chart provides a ranking of all evaluated projects, in order of greatest financial gain represented as Net Present Value (NPV) over 20 years. The Net Present Value accounts for the capital and operating costs of each project over its life span, and discounts the operational or financial benefits each year by a discount factor of 9%.

<u>Net Present Value Rank</u>	<u>Projects</u>
1	High Efficient Showerheads
2	Eliminate pilot lights on water heaters
3	High Efficient Lighting
4	Programmable Thermostats
5	Outdoor Timer for Block Heater and Car Warmer
6	Outdoor Timer for Block Heater
7	Electronics - Star Choice
8	Active Solar Hot Water Heating
9	Waste Management
10	Freezer Upgrade
11	Tree Plantations
12	Photovoltaic & Solar Space Heating
13	Domestic hot water heater to high efficient
14	Incentives to build to R-2000 standards

15	Clothes Dryer to Natural Gas
16	Attic Insulation
17	Basement Wall Insulation
18	Refrigerator Replacement
19	Purchase Emission Credits
20	High Efficient Furnace from Standard Efficient
21	Green Power Purchase
22	Mid Efficient Furnaces from Standard Efficient

## **OUR RECOMMENDATIONS: SEVEN INITIAL PROJECTS**

### **OUR OBJECTIVES**

To establish a mechanism to educate the community of Regina about the climate change issue, gather support for community action, get them engaged in efforts to reduce greenhouse gas emissions in their homes, and leverage support (financial and technical) from provincial and federal governments.

These seven projects are recommended as the first actions, targeted for 2004 or as soon as possible as they offer the least-cost alternatives to reducing emissions:

- Establish a program where all households in Regina have access to affordable or complimentary high efficiency showerheads.
- Encourage vehicle owners who use block heaters and/or interior car warmers to install timers.
- Promote the installation of high efficiency lighting in all new homes and the replacement of low efficiency lighting in existing housing.
- Provide incentives for the community to upgrade their existing home thermostats to programmable thermostats.
- Advance the goal of eliminating pilot lights on water heaters through manufacturers and suppliers. In addition, encourage the community to renovate existing hot water heaters.
- Encourage all homeowners to complete an EnerGuide Audit on their home and understand the value of making the necessary renovations to ensure their homes maximize energy efficiency.
- Create a Residential Greenhouse Gas Reduction Handbook, which will provide residents with a source of information on greenhouse gas reduction opportunities.

## **TOP SEVEN INITIAL RECOMMENDED PROJECTS**

### **GOAL 1**

Establish a Program where all households in Regina have access to affordable or complimentary high efficient showerheads.

#### **Actions Required**

- Set up a meeting of potential interested stakeholders/partners to discuss a program concept to achieve Goal #1. Provide support analysis of benefits/cost ratio
- Draft a Program Proposal based on the results from the stakeholder/partner meeting, if warranted
- Develop a Pilot Program to test and demonstrate the effectiveness of high efficient showerheads

- Develop a proposed draft budget based on the proposed program, setting proposed targets and time frames
- Establish a promotional, purchasing (bulk buying), and installation plan for high efficiency shower heads
- Determine and secure potential financial sponsors/partners to generate necessary funds to cover the material costs of the program
- Establish an implementation committee along with identifying roles
- Establish the Program Implementation Logistics
- Establish, design and direct a Marketing Campaign including a Program kick-off

## **GOAL 2**

Encourage vehicle owners who use block heaters and/or interior car warmers to install timers.

### **Actions Required**

- Encourage vehicle owners to recognize the substantial financial savings that will result in significant greenhouse gas emission reduction, thereby protecting their natural surroundings from climate change due to the greenhouse effect caused by rising levels of carbon dioxide in the atmosphere.
- Encourage all timer suppliers to promote the use of this equipment by providing information about financial economies and greenhouse gas emission reduction equivalents.
- Encourage electricity suppliers to continue promoting use of block heater timers.
- Encourage vehicle dealerships and service providers to promote the use of block heater timers along with properly maintained and winterized vehicles as two of the ways their customers can benefit themselves and their natural surroundings.
- Recognize that some vehicles may be required to be ready to go at all times for emergency purposes during severe cold weather.

## **GOAL 3**

Promote the installation of high efficiency lighting in all new homes and the replacement of low efficiency lighting in existing housing.

### **Actions Required**

- Encourage all new home builders, lighting contractors/suppliers and buyers to promote and request substitution of incandescent lighting with high efficiency, colour compatible and long life fluorescent fixtures
- Encourage lighting suppliers to feature high efficiency, high frequency, daylight balanced fixtures and lamps for reading and task work areas
- Encourage lighting suppliers to display efficiency information and greenhouse gas emission reduction guides
- Encourage Regina residents to contribute to greenhouse gas reduction, through the use of high efficiency lighting, to save money and protect their natural surroundings from degradation that will result from climate change
- Encourage the education system to promote greenhouse gas emission reduction through electrical energy reduction through use of high efficiency lighting by students and the practice of turning lights off when not needed

## **GOAL 4**

Provide incentives for the community to upgrade their existing home thermostats to programmable thermostats.

### **Actions Required**

- Encourage all new home builders and buyers to promote and request programmable thermostats --target the new housing sector first
- Create a technical fact sheet for heating contractors and equipment suppliers that speaks about the operational convenience and benefits
- Encourage heating contractors, equipment suppliers and retail stores to display programmable thermostats and market the associated energy savings, convenience, effectiveness, and environmental benefits of programmable thermostats
- Contact manufacturers and suppliers to persuade them to support the product through adequate inventories and advertising
- Establish an implementation plan through a collection of municipal, provincial, and federal program experts
- Promote the benefits through an advertising campaign, i.e. newspaper, radio, brochures or the Green Ribbon Committee's website.
- Determine if any provincial or federal rebates or incentives apply to this kind of home retrofit
- Monitor and report on the take-up rate of consumers

### **GOAL 5**

Advance the goal of eliminating pilot lights on water heaters through manufacturers and suppliers. In addition, encourage the community to renovate existing hot water heaters.

### **Actions Required**

- Set up a stakeholder meeting with Regina water heater Companies to discuss the merits of a program to achieve Goal # 5 mentioned above
- Consider the merits of developing a pilot program in the City of Regina. (SaskEnergy should be represented at initial meetings)
- Draft cost/benefits plan for an individual homeowner
- Develop a proposed draft budget which includes established targets / timeframes
- Determine what existing programs of similar nature already exist at either the local, provincial or federal level
- Determine if any provincial or federal rebates / grants apply to this kind of home retrofit
- Establish an implementation plan
- Persuade manufacturers and suppliers to be sponsors and for them to provide some seed money to kick off the plan and to provide advertising funding for the program
- Promote the benefits of eliminating pilot lights through an advertising campaign, i.e.: newspaper, radio, brochures or the Green Ribbon Committee's website
- Meet with Companies / SaskEnergy to re-assess the program after its first year of running

### **GOAL 6**

Encourage all homeowners to complete an EnerGuide Audit on their home and understand the value of making the necessary renovations to ensure their homes maximize energy efficiency.

### **Actions Required**

- Publicly endorse the EnerGuide for Houses Audit as an effective tool for homeowners to learn more about their Home and how to improve the energy efficiency
- Set up a joint meeting of the municipal, provincial, and federal governments to help make a coordinated effort to have Regina residents improve their homes' energy efficiency

- Identify what is happening in the city and what can be improved, how to encourage the public to choose the best efficiency upgrades and not just the minimum
- From that meeting set up a plan of action and assign tasks
- Possible Demonstration Home, open house, to kick off the new campaign.
- Possible list of certified, “Trained installers program”
- Establish an implementation committee to follow up on results and targets

## **GOAL 7**

Create a Residential Greenhouse Gas Reduction Handbook, which will provide residents with a source of information on greenhouse gas reduction opportunities.

### **Actions Required**

- Gather existing resources available through entities including Natural Resources Canada’s Office of Energy Efficiency, Environment Canada, Climate Change Saskatchewan, Saskatchewan’s Office of Energy Conservation, Saskatchewan Environment, SaskPower and SaskEnergy.
- Determine where research is required to make existing information more locally applicable
- Determine where gaps exist and determine how to fill these gaps
- Prepare the information into a web based library format
- Prepare the information into a paper-resource format
- Determine an effective advertising and distribution procedure to alert the public to the existence of this resource
- Determine how effective the public finds this resource
- Develop a process to update the information on a regular basis

## **OTHER RECOMMENDATIONS**

In addition, the Residential Subcommittee recommends that

- The GRC use existing, positive programs and policies to develop policies to help reduce GHG emissions. For instance, the City’s Development Plan, contains existing policies to ensure the urban form supports transit and that old buildings are redeveloped (see page 17 of the Development Plan for examples)
- The City work with the provincial and federal governments to develop and enhance a home energy retrofit program. A working group consisting of the federal department of NRCan and the Office of Energy Efficiency, and the provincial departments of Saskatchewan Environment, Saskatchewan Industry and Resources, and the Office of Energy Conservation should be struck
- Different strategies should be developed to target different areas and neighbourhoods within the city. On average new and old houses generate the same amount of greenhouse gas emissions; however, in new houses, most of the emissions are generated by the larger amount of electricity used than in the older houses, while the opposite is true for the older houses in the core area of the city, which produce more GHGs through their higher natural gas consumption
- The City list organizations that can support the City’s GHG initiatives and use their influence. As an example, encourage the City to take resolutions to SUMA to lobby the provincial government for financial and program support. Use the Federation of Canadian

Municipalities (FCM) to help secure support for the City's emission reduction, environmental sustainable initiative

- The City investigate the regulatory measures that the City can take to reduce emissions in the residential sector and discuss opportunities for doing things differently
- Changes to the regulatory system or standards at the federal or provincial level are examined in an effort to eliminate barriers to action. Participate in that change process if appropriate
- The City support federal standards that address climate change (e.g. low flow toilets, energy efficient lighting, high efficiency appliances) so that the only choice the consumer can make is an energy or resource efficient choice
- The City includes energy efficiency or conservation plans in all programs that it has control over. For instance, the RRAP program is a program for the inner city areas that focuses on health and safety. The City might include energy consumption as part of the criteria for homes in this program. If a furnace or window needs to be replaced for health reasons, the recommendation could be to ensure that the most efficient replacement be installed
- The City establish energy targets for all housing projects in which it participates - it may wish to support the R-2000 Program for Houses
- All new residential subdivisions be built with a minimum of 90% of all streets laid out on an East-West grid
- When the City reviews its programs and policies, that the impact on GHG emissions must be specified and considered
- All government and crown organizations that provide utilities or services to the residents of Regina (SaskEnergy, SaskPower, SaskWater, SaskTel, Highways) as well as all independent businesses, prepare a plan for the way they contribute to developing a community action plan
- The City look at creative solutions to transportation options and waste management methods (school bus transportation - school boards are competing for students by offering bus rides to and from school for students)
- The city help establish a solar energy products and services industry in Regina to allow greater ease in adopting low emission technologies
- The City consider developing fiscal instruments that incorporate environmental costs into the marketplace thus accounting for environmental and social costs as part of their economic decision-making

### **IMPLEMENTATION STRATEGY**

The implementation of the residential action plan requires the participation of a number of civic, provincial and federal government departments. The City's Green Ribbon Committee will provide direction regarding who should take the lead role for each of the objectives and how the action plan activities should be delivered.

To coordinate and manage the implementation of the plan, a separate “management committee” should be established to set annual objectives, seek the financial resources necessary to deliver the results (establish annual budgets), track the results, and prepare a report on the success of the plan. This committee will work with other partner agencies and groups to achieve the plan’s objectives.

## **Appendix 3: INDUSTRIAL, COMMERCIAL AND INSTITUTIONAL**

### **Introduction**

The ICI Subcommittee was charged with determining the most locally applicable, appropriate, and practical set of actions related to the industrial, commercial, and institutional sectors to be implemented in Regina in order to meet the greenhouse gas emissions target set by City Council. Some of the recommendations suggest that the City of Regina take more direct action. In many cases the proposed actions are suggestions to promote action by others.

The industrial, commercial and institutional sectors are important to engage in actions to reduce their energy consumption, and in turn, their GHG emissions because there is great potential for energy savings within this sector. As well, there are numerous federal programs that exist and that are to be released that local businesses should be encouraged to participate in.

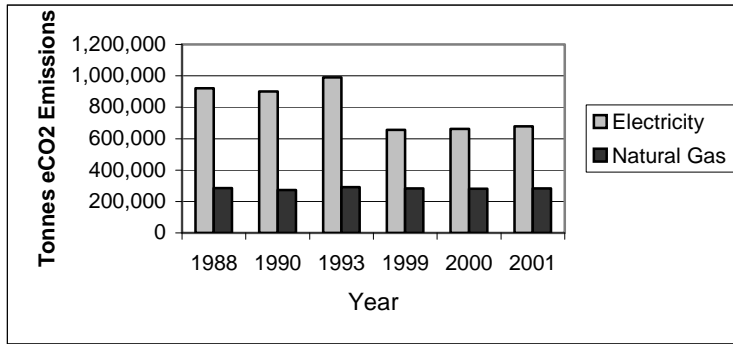
The Subcommittee is comprised of some of the most knowledgeable and experienced practitioners in the field of energy management available in Regina, which were available to the project. Generally meetings were held monthly but frequently more often.

It was determined early in the process that consultation with focus groups and meeting with those who are intimately involved in the sectors could be of benefit in the Subcommittee's deliberations. As such, in co-operation with the Regina Energy Management Task Force, a series of breakfast meetings were held with the operating engineers. State of the art energy management presentations of interest to the group were given. At each session the group was asked for suggestions. They were also asked for input. In both cases no responses were received. In order to engage the sector in the implementation of the proposed action plan, one recommendation of the ICI Subcommittee is to try other processes to obtain participation.

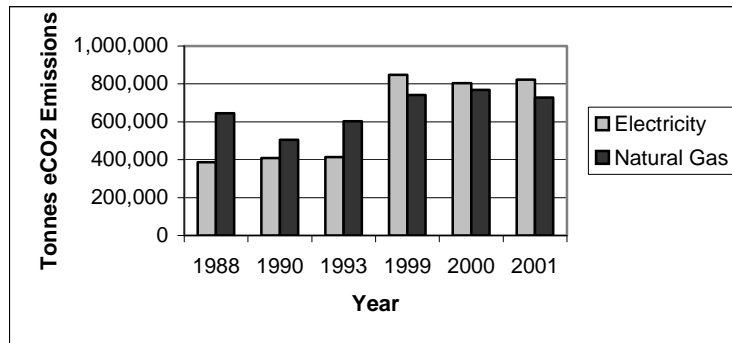
The Subcommittee has been told that Institutions generally have no budget for energy conservation work. Any done to date has been through savings financing programs, which come from performance contracts.

Over the last 10 years the real estate market has declined significantly in Regina leaving most owners with little or no funds for energy retrofits and not qualifying for saving financing programs as they do not meet the minimum scope of work.

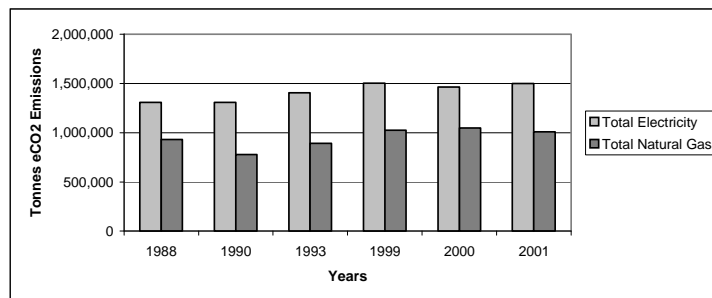
The actions put forth by this Subcommittee take these factors into consideration in order to put forth suggestions that have reasonable opportunities for success. In all 33 actions have been put forth and have been prioritized according to potential impact.



**Figure 11: Emissions from electricity and natural gas consumption in the commercial sector**



**Figure 12: Emissions from electricity and natural gas consumption in the industrial sector**



**Figure 13: Emissions from electricity and natural gas consumption in the commercial AND industrial sector**

## Recommended Actions (Priority Listing)

### ACTION ITEM#1—Database

#### **Rationale**

In order to effectively communicate with commercial, industrial and institutional organizations, information must be available as to the name of the organization and the property or properties owned within the city.

#### **Description**

Create a database of all commercial, industrial and institutional facilities within 20 kilometres of the city. Also create a database of people involved with the ownership, operation and maintenance of all commercial, industrial and institutional facilities within 20 kilometres of the city.

#### **Implementation**

**Timing:** As the data base preparation is a particularly large task, it should be implemented as soon as possible. Assistance from municipal and provincial government would be very helpful in order to have a reasonable starting point. For example, the City's taxation database may be a starting point to create a list of properties within the city. Provincial information from Saskatchewan Justice/Corporations Branch could be also be utilized

**Duration:** Database creation will be an ongoing project as people and organizations move into and out of the City. However, the initial effort to design and implement a database will be substantially greater than its ongoing maintenance

**Funding:** Significant funding will be required and staff will be needed for implementation

**Partners:** Involvement and assistance from other levels of government will be a great help. Key corporate partners could be recruited, and prominent citizens could be asked to lend their support and influence in the community

#### **Other**

- Whether the database will be used for other purposes or by other organizations will be important in attracting participation from individuals and organizations. Those listed in the database may not be entirely supportive of the initiatives behind the database
- The City has indicated a willingness to make available their database information to assist the Green Ribbon Committee Activities
- Further discussion is required to determine who will have access to the database and to determine how the city databases could be utilized for Green Ribbon Committee activities
- Further discussion will be required to address Privacy Issues

#### **Potential Positive Results**

- Quick, easy access to information to facilitate contact by facility type, product, location, ownership, etc.
- Enhance the ability to communicate effectively
- Enhance the ability to monitor and identify progress and results

#### **Potential Negative Results**

- Organizations and individuals may not want to be contacted on a regular basis
- Concerns about protection of privacy
- Potential that database may be used for purposes beyond that originally anticipated
- Perception that certain individuals or organizations are being singled out or that contact implies that they are not good corporate citizens
- Perception that certain individuals or organizations are being asked to assume a larger roll or position than warranted by their business
- General concerns about fairness

## **ACTION ITEM #2—GRC Database**

### **Rationale**

This subcommittee recommends that the City accurately monitors the amount of green house gas emissions from industrial commercial and institutional properties to ensure that there continues to be value in the programs that are being offered. To be able to determine the success of any program one must have a good understanding of where one is starting from (a base line), and a way to track the success of initiatives that meet the objectives of the program.

### **Description**

To report reduction of green house gas emissions, the City will require a data base which identifies all industrial commercial and institutional properties. This data base must be populated by information on the type of business being conducted, and the types and amounts of energy being consumed at each property. This information can then be used to identify opportunities for targeted communications, track carbon credits, assist businesses in managing of carbon credits (these will be worth money), among other things.

Some of the information required is already available within different databases in different City departments. As well, information on energy usage at the different properties is available from the utilities.

### **Implementation**

**Funding:** The cost of this work would have to be funded by the City

**Partners:** Efforts should also be made to partner with secure federal and provincial governments agencies such as NRCAN and SERM

### **Potential Positive Results**

With the City and the two energy utilities understanding of the importance of any initiative to reduce green house gas emissions it would seem that these groups would work together to provide the relevant data required to provide an accurate picture of green house gas emissions in the city.

### **Potential Negative Results**

Recognizing that there are a number of issues with respect to confidentiality of information the cities legal department would be required to provide assistance in working with issues around the release of information. Without this information there is no true way of accurately determining the true magnitude of the impact on the initiatives of the Green Ribbon program.

## **ACTION ITEM #3—Educate ICI Sector, including Real Estate**

## **Rationale**

In the commercial sector, with few exceptions, decisions on implementing energy conservation measures are made based on financial considerations. Predominant attitudes dictate that any money spent should come back as savings in 3 years or so. This attitude prevails on retrofits or additions, even though the original acquisition costs are financed over much longer periods. This mind set has to be changed in order to accomplish meaningful greenhouse gas emission reductions.

## **Description**

There are a number of ways to influence decision makers:

- Organize peer group activities with industry leaders who support the cause
- Provide technical data to potential implementers of efficiency technology.
- Create awareness and access to required data with user groups through co-operating with media
- Offer workshops and seminars to pass on information, answer questions, and create support.

## **Implementation**

**Timing:** This process has been underway for many years. Trade association professional associations, Government and educators have all been promoting energy efficiency in their own way. Unfortunately all that work has not had the required affect on commercial property owners, particularly at the boardroom level.

Timing in this context will be when the City of Regina takes action. The answer as to when it should is now.

A methodology for identifying and contacting the target sectors effectively is mandatory prior to full implementation of any such action.

**Duration:** This is an ongoing action. It has to keep up to technology improvements, personnel changes, government policies etc.

**Funding:** The city is well positioned to have staff create & administer Communications systems. By doing it that way confidentiality can be maintained yet the Green Ribbon process can take advantage of the cities capabilities. Regular mail is out of the question cost wise for the sort of communications required here.

Some expert presentations will be needed to convince people to take action. Partnering is a viable way to reduce these costs. The City has many facilities such as the Forum, Community centres, etc. with which to conduct sessions at low cost. The EMTF Boiler Room Breakfasts held this winter are an example.

**Partners:** Partners could include Professional Associations, Trade Associations, Educational Institutions, Governments and Government Agencies.

## **Potential Positive Results**

More knowledgeable people will take action to improve efficiency in such items as: lighting retrofits and auto controls, maximised efficiency of existing equipment, maximised use of space, retrofitting systems when potential for payback & savings is identified, and increased awareness and commitment to responsible use of resources

## **Potential Negative Results**

If properties are run more efficiently, are properly maintained and have highly efficient use of space it may have the effect of offsetting the demand for new construction. This is bad for the economy but good for emissions reduction.

## **ACTION ITEM#4: Economic Incentives**

### **Rationale**

The rationale for this action item would be to encourage more “Green” projects within the community.

### **Description**

The intent of this action item would be to remove barriers from, and increase incentives to, the development of new or retrofit type projects that might otherwise not be considered because of their lower rate of return to potential stakeholders.

These incentives could include municipal (or indeed provincial or federal) tax based incentives, low cost-of-money strategies, subsidisation of implementation costs, etc.

### **Implementation**

**Timing:** Development of a business plan for this action item could be developed immediately. A time frame of one to three years might be needed for full implementation. The longer term might be needed if innovative implementation concepts require changes to provincial laws (such as tax based incentives, building code changes, etc.).

**Duration:** The programme duration would be as long as necessary. This could be from five years to ten years or beyond, depending upon specific programmes implemented and public uptake with respect to these programmes.

**Funding:** A business plan will need to be developed to provide specific funding needed based on potential programmes to be implemented. It is anticipated initial seed money will be needed, and continued funding will be required for the life of the programme.

**Partners:** Involvement and assistance from other levels of government will be a great help, and a requirement for a good deal of the strategies. A strategy involving a public-private partnership could be developed. This, however, would require a good deal of cooperation and innovative thinking to ensure maximum benefit to all stakeholders. Key corporate partners and local prominent citizens could be brought into the programme at the initial stages to assist.

### **Other**

- Care must be taken to insure the programme is incentive based, rather than disincentive based so as to permit quicker and more positive acceptance within the community. This is particularly important in light of the “Kyoto Bashing” and uniformed Kyoto implementation strategies that have recently been receiving negative press
- Only quick implementation will allow the community based secondary benefits of the programme to be realised. If Regina starts to lag behind in implementation, it will lose its edge in the ability to offer these incentives to its residents and businesses

## **Potential Positive Results**

- Reduction of greenhouse gases produced within the community

- Provide a community perception that a pro-active approach is being taken towards greenhouse gas reduction
- More projects developed within the community, which will as a secondary benefit increase the economic growth of the community. This would be seen by providing more jobs both in the implementation and the development sectors
- Development of expertise within the community that could be exported to other interested groups within the province, within the country, or potentially out-of-country

### **Potential Negative Results**

- If poorly implemented, a perception of hidden costs leading to increased taxes would be counterproductive
- Although a programme such as this could be self-sustaining, initially there would be some seed monies needed to get the programme underway

## **ACTION ITEM #5: Amendment to Municipal Assessor's Manual**

### **Rationale**

Encourage the Industrial, Commercial and Institutional buildings sector to make upgrades to their properties.

### **Description**

This subcommittee recommends that the City of Regina petitions the provincial government to propose changes to the municipal assessor's manual. The proposed changes would ensure that upgrades to facilities/properties that reduce energy usage and the associated greenhouse gas emissions not be included as improvements (which increases the assessed value of the property).

### **Implementation**

**Timing:** Discussions with the provincial government and other federal and municipal partners should begin immediately.

**Duration:** Should changes to the assessment manual made then those changes should be permanent.

**Funding:** There should be no incremental funding required for negotiations, however, funding to make up for the tax revenue shortfall may be required.

**Partners:** As mentioned implementation of this action has provincial implications, therefore, the Saskatchewan Urban Municipalities Association (SUMA) and the Saskatchewan Association of Rural Municipalities (SARM) should be solicited for support.

The federal Government has significant dollars slated for funding the reduction of greenhouse gas emissions therefore they should be approached to fund any shortfall of tax revenues as a result of implementation of this action.

### **Potential Positive Results**

- Owners of industrial, commercial and institutional properties will be encouraged to implement improvements that will reduce energy usage and not have to be concerned about the municipal tax implications
- The assessor's manual is a provincial manual therefore the changes to the manual will reach the entire provincial sector rather than just the City of Regina

### **Potential Negative Results**

- It is a departure from the current thinking that the greater the value of a property the greater the assessment and the associated higher taxes paid (higher valued properties pay more taxes)
- Municipal governments may feel that implementation of this action will reduce tax revenues
- Shortfalls in tax revenues may have to be made up by increased mill rates to all rate payers

## **ACTION ITEM#6—Business Leaders**

### **Rationale**

The biggest barrier to implementation of energy efficiency and other greenhouse gas emission reduction measures is at the top most level of businesses. The people in the boardrooms have to be convinced to take action.

### **Description of this Action**

Peer pressure, leadership by example and public awareness of successes can serve to drive change. The mayor has the ability to recruit community leaders into a program. While he does not have time to be a "hands on" participant, he can start the ball rolling and let an organized program run with it. The NRCAN INNOVATORS program is an example but not necessary a model.

### **Implementation**

**Timing:** This thrust can start immediately. It can work in concert with the deliberations of the GRC. It will take time to grow. The important first step is to carefully choose the contact group. Civic lobbying could help establish a leadership group.

**Duration:** There is every reason to believe that once sold on the cause, the original participants, obviously the choice leaders available would continue to support the program as long as it runs.

**Funding:** Initially funding may be required for a luncheon where the Mayor with the help of the program managers will lay forth the concept. Ideally 50 plus potential leaders will attend. Thereafter a communications and administration budget will be needed. As in any sales program success must be rewarded in order to keep it going.

**Partners:** Due to its nature the program should bring participants to regard themselves as partners with the City. Other agencies, which may want to participate, are the utilities, the office of Energy Conservation and NRCAN.

### **Potential Positive Results**

The positive results will be an acceptance of the need to take action within the business community and a natural growth of the numbers of those participating in GRC projects.

### **Potential Negative Results**

The potential for negative results rests only with whoever operates the ongoing City program. There should be none.

## **ACTION ITEM#7—Bundling Smaller Businesses for ESCo Project**

### **Rationale**

The rationale for this action item would be to encourage more “Green” projects within the community.

### **Description**

The intent of this action item would be to establish a savings financing programme to bring together small businesses within the Industrial, Commercial, and Institutional sector who might not otherwise qualify for the benefits offered by and Energy Savings Company (ESCO).

### **Implementation**

#### **Timing**

Development of a business plan for this action item could be developed immediately. A time frame of one year might be needed for initiation of the programme, with three to five years for full programme function.

#### **Duration**

The programme duration would be as long as necessary. This could be from five years to ten years or beyond, depending upon public uptake with respect to these programmes.

#### **Funding**

A business plan should be developed to provide specific funding needed based on potential programmes to be implemented. Ideally one would like to see this programme self supporting, and this should be the goal of the programme in general.

#### **Potential Partners**

- Involvement from other levels of government would be beneficial, but not necessary. Even non-financial support from provincial or federal governments would be an advantage
- A strategy involving a public-private partnership could be developed. This strategy could involve developers, PPP organisations, consulting engineering firms, ESCO organisations, and the like
- There could be an advantage to partnering with SaskPower and/or SaskEnergy

#### **Potential Positive Results**

- More wide spread results for reducing greenhouse gases for projects that might otherwise be considered too small
- More projects developed within the community, which will as a secondary benefit increase the economic growth of the community. This would be seen by providing more jobs both in the implementation and the development sectors

#### **Potential Negative Results**

- The programme would likely have some costs that could not be paid back through the programme itself, hence there may need to be some funding
- It is likely that the start-up of the programme will need some seed monies
- Poor or overly bureaucratic implementation may turn people away from potential incentives offered by the programme

## **ACTION ITEM #8—Amendments to Reassessments**

### **Rationale**

Each time a property owner takes out a building permit to improve their property the information goes to the assessor for reassessment due to the improvement. This may be a disincentive to do energy saving retrofits such as insulation and windows etc. This disincentive should be removed.

### **Description**

The assessors must be made knowledgeable as to what constitutes such an item through training. Then assessment procedures must be amended to suit. The public then must be made aware of this exemption.

### **Implementation**

**Timing:** This could be implemented immediately once the city irons out any conflicts any existing conflicts with Saskatchewan Assessment Management Agency and the assessment manual.

**Duration:** This program should be a permanent one embedded in the require legislation.

**Funding:** In-kind work by the City employees, administration and communications are the City's main costs. The tax issue is regarded to be neutral due to incentive-driven investment.

**Partners:** The Province of Saskatchewan and SAMA are envisioned as partners.

### **Potential Positive Results**

Property owners may be encouraged to take action that they otherwise may not have taken. It will be a positive indication that the city is on side and is working for the benefit of the owner as well as the environment.

### **Potential Negative Results**

While the city will not get more taxes based on the improvement there should considered to be no loss as without this action the work would likely not have been done.

## **ACTION ITEM #9--District Heating**

### **Rationale**

To make use of existing wasted energy by reusing the energy in the core area facilities, thus reducing their demand on primary energy sources.

### **Description**

Recall and review the previously completed study for the reuse of exhaust energy from IPSCO and other industries for energy requirements in the City core area. Capture the wasted energy as outlined in the 'study'. Transmit the captured energy via supply lines to the core area. Connect the supply to the selected user sites/facilities or selected areas of adaptable need.

### **Implementation**

**Timing:** Review the study to assess these elements. Form a review committee to complete the assessment and compare considerations for further actions.

**Funding:** Review the cost-benefit analysis in relation to present day and updated values/costs. Engineering/design analysis will require funding.

### **Other**

- Consider other methods of capturing the wasted energy resource (other than those considered in the study)
- Consider other methods of transmitting the captured energy, possibly to neighbouring industries rather than the Regina core area

### **Potential Positive Results**

- Capturing useful but wasted energy
- Commercial advantage to the supplier for selling a costly wasted component
- Possibly a new source of energy and an inexpensive supply for the users
- The success of this project would be a certain positive example of the sensible adaptation and utilization of an otherwise wasted energy supply/source

### **Potential Negative Results**

- Capturing the wasted energy may be too difficult/expensive to justify
- Transmitting the energy may not be feasible/realistic/safe
- Users access to this new source may be difficult to change over to and may also be too costly to accept/justify

## **ACTION ITEM#10: Support for Green Buildings**

### **Rationale**

The rationale for this action item would be to encourage more “Green” projects within the community.

### **Description**

This recommendation has three significant components

- Identify owners of major buildings, commercial, industrial and institutional
- Draft a letter from the Mayor to major building owners soliciting their support to the activities of the Green Ribbon Committee
- Design program criteria to qualify as Green

### **Implementation**

**Timing:** Development of a business plan for this action item could be developed immediately.

With respect to each of the three initiatives:

- For identification of the major building owners, a time frame of three to six months might be needed. Sources such as SaskEnergy or SaskPower could be approached for generating a list of their major clients – attention will have to be paid to maintaining the privacy of their accounts
- A letter for the Mayor’s signature could be developed within this same three to six months time frame
- Development of a Green Programme could take as little as six months or perhaps even less if developed around the existing U. S. Green Building Council’s LEED programme (Leadership in Energy and Environmental Design)

**Duration:** The first two items would be a relatively short duration, as noted above. The third could be in place indefinitely.

**Funding:** It is expected that the first two items would have little or no cost. This would not include analyzing or processing the list of large building owners. The third item could integrate into an existing governmental program either municipal or provincial, however there would be some additional workload involved, which could be as much as one person year per annum.

**Partners:** Involvement from other levels of government would be beneficial, but not necessary. Even non-financial support from provincial or federal governments would be an advantage. There could be an advantage to partnering with SaskPower and/or SaskEnergy.

#### **Potential Positive Results**

- More wide spread support for reducing greenhouse gases within the community
- More projects developed within the community, which will as a secondary benefit increase the economic growth of the community. This would be seen by providing more jobs both in the implementation and the development sectors

#### **Potential Negative Results**

- Poor or overly bureaucratic implementation may turn people away from potential incentives offered by the programme.

### **ACTION ITEM #11: Multi-Level Government Communication**

#### **Rationale**

Communication with the Provincial Government will indicate areas of common interest, overlap, agreement, information, and direction.

Could also provide a stimulus to encourage the Province to present a greater interest in the Accord, and bring them up to date on the activities and efforts of our community.

#### **Description**

Establish a contact with the Provincial Ministers and department personnel who have a responsibility for Greenhouse Gas Emissions and Environment & Education.

#### **Implementation**

**Timing:** Now that the federal government has ratified and signed Kyoto, our coordinating contacts with the provincial government should begin immediately.

**Duration:** This will be an ongoing communication.

**Funding:** Not expected to be required.

#### **Potential Positive Results**

- Avoid overlap and duplication of effort and production
- Gain useful information

#### **Potential Negative Results**

- None foreseen.

### **ACTION ITEM#12: Bring Stakeholders into GRC Loop**

#### **Rationale**

Businesses should be able to consider the energy requirement to manufacture and use a variety of tendered products. Businesses should be encouraged to request the energy data for manufacturing and operations of products and have that provided for consideration at the time of tender. The City of Regina can lead the process implementation by example.

### **Description**

With the federal government, the City should introduce a requirement in tender documents to include the energy required to manufacture a requested item as well as the projected energy consumption, if applicable, to utilize the item. The energy to manufacture and/or use the item would become another criteria used to select and award bids.

### **Implementation**

**Timing:** The energy requirement clause could be implemented as soon as the purchasing and legal departments provide wording. The Saskatchewan content requirements for provincial tendering could be used as a guide.

**Duration:** Ongoing program.

**Funding:** Funding would be required to develop a policy publication to market to others.

**Partners:** Architects, Engineers, Product Suppliers, Crown Corporations, and NRC-CCME

### **Potential Positive Results**

- The energy associated with manufacture and use of an item will become something manufactures and purchasers will become more aware of
- If items that are more energy economical to manufacture and use become favoured a reduction in energy consumption is probable

### **Potential Negative Results**

- Reluctance to do the homework to provide the data may reduce some numbers of potential bidders
- There will be a labour cost that bidders will want to recover

## **ACTION ITEM#13: Identify Manufacturers of Green Equipment**

### **Rationale**

Manufacturers of energy efficient equipment are the most knowledgeable people as to what that equipment can do. They are anxious to have their equipment implemented so they have a vested interest in convincing publics to use it. Examples of equipment that would be targeted would be that which relates to HVAC, glazing, controls, insulation, and lighting (including solar). Their expertise would add too many of the action items identified by the GRC.

### **Description**

- Contact local representatives of those companies identified by the I.C.I Sub-committee as those capable of enriching the work of the Green Ribbon Committee.
- Propose the participation level suggested and outline the expectations of their involvement

- Determine the best use of each expertise and invite into specific projects
- Work towards obtaining the highest level of expertise available in each corporation i.e. design engineers etc.
- Solicit monetary funding or in-kind participation for specific project

### **Implementation**

**Timing:** Recruitment of these partners should occur only once a program has been developed far enough by the City to indicate that

- It meets city guidelines
- It is conditionally approved providing design parameters are met.

**Duration:** Feelers for this program could be put out informally at any time. Formal invitation should happen only when above parameters are met.

**Partners:** Representatives of energy efficient equipment manufacturers

### **Potential Positive Results**

- A deeper understanding by all of the potential benefits of products and or systems and their application
- A better awareness of technological application to foster adaptable programs
- Better credibility for the Green Ribbon Committee through manufacturers' participation

### **Potential Negative Results**

- Some competitors may cry sour grapes. All should be given an opportunity to participate
- Support will be lost if appropriate recognition and equal billing is not provided by the City

## **ACTION ITEM#14: Energy Efficiency Preferences When Tendering**

### **Rationale**

Businesses should be able to consider the energy requirement to manufacture and use a variety of tendered products. Businesses should be encouraged to request the energy data for manufacturing and operations of products and have that provided for consideration at the time of tender. The City of Regina can lead the process implementation by example.

### **Description**

With the federal government, the City should introduce a requirement in tender documents to include the energy required to manufacture a requested item as well as the projected energy consumption, if applicable, to utilize the item. The energy to manufacture and/or use the item would become another criteria used to select and award bids.

### **Implementation**

**Timing:** The energy requirement clause could be implemented as soon as the purchasing and legal departments provide wording. The Saskatchewan content requirements for provincial tendering could be used as a guide.

**Duration:** This can be an ongoing program

**Funding:** Funding would be required to develop a policy publication to market to others.

**Partners:** Architects; Engineers; Product Suppliers; Crown Corporations; National Research Council; Canadian Council of Ministers for the Environment.

### **Potential Positive Results**

- The energy associated with manufacture and use of an item will become something manufactures and purchasers will become more aware of
- If items that are more energy economical to manufacture and use become favoured a reduction in energy consumption is probable

### **Potential Negative Results**

- Reluctance to do the homework to provide the data may reduce some numbers of potential bidders
- There will be a labour cost that bidders will want to recover

## **ACTION ITEM#15: Green Merchant Program**

### **Rationale**

Retail business is very different from other types of business in many ways. It is clear that an approach to retailers must address those differences in order to get a buy in the City's goals.

### **Description**

Create a green merchant program, which will encourage retailers to take actions, which will contribute to greenhouse gas emission reduction in Regina. The program should provide participants with information on resources information on product availability implementation procedures and financing. Successful participation would result in public acknowledgement of the business as a "Green Merchant".

### **Implementation**

**Timing:** This program would commence on the availability of start-up funding.

**Duration:** On ongoing program which could be passed off to another organization, such as Chamber of Commerce, once up and running.

**Funding:** Partnerships should be sought out from day one. They could help with funding and work in-kind provincial and federal programs on energy conservation and best potential.

**Partners:** All levels of government agencies; Merchant Associations; Chamber of Commerce; Better Business Bureau; Product Suppliers; Crown Corporations

### **Other**

Refer to the Energy Management Task Force 1991 paper on Retail Energy Management Programs.

### **Potential Positive Results**

- Once a key group is sold on the idea the project will expand exponentially on peer pressure & public support
- The associations embracing retailers will be able to participate in promoting the objectives, which will expand and intertwine with other sectors

### **Potential Negative Results**

- None envisioned.

## **ACTION ITEM#16: Tenant Education Program**

### **Rationale**

To educate tenants regarding their lighting, heating, transport, ergonomics, and waste practices in terms of efficiency, management and cost controls.

### **Description**

Some example businesses could be chosen to review existing conditions and then to plot the potential improvements and changes, which would show the value of the procedure. The actions could then be explained and calculated to verify the efficiency factors and the cost benefits. These examples could be test run with the business tenants and then re-rationalized and reworked to make a satisfactory presentation. From this, a working presentation methodology could be prepared which could be given to any tenant to 'fill in the blanks' and set out their own changes and direction. A follow up and assessment system would have to be developed for an ongoing record of the actions and the results.

The educational components could be in the form of descriptive written material (such as case studies), examples of confirming articles, claims by other owners, and by explanatory cost comparisons showing the economic advantage.

### **Implementation**

**Timing:** The procedure and test examples could be run over a period of a few weeks. The development of the final operating procedure would be about four weeks. Distribution of printed materials and follow up with contacts over the next few weeks would lead to program wrap-up.

**Duration:** This could be developed into an ongoing program.

**Funding:** The initial development and printing costs could be kept low and the distribution, follow up, education, and assistance costs and the data collection may involve staff and computer work and therefore some greater costs to operate.

**Partners:** Equipment Suppliers; Waste Management Service Companies; ESCos

### **Potential Positive Results**

Improve the understanding and knowledge of the tenants and cause them to activate changes, which can actually improve their conditions and reduce costs.

### **Potential Negative Results**

Some difficulty in getting some owners to understand the potential changes to their business considerations and to recognize that outside advisors may be able to suggest improvements to how they may be operating their business. Also, it may be too difficult to express actual cost savings by life cycle cost criteria.

## **ACTION ITEM#17: Assemble Energy Efficient Demo Programs**

### **Rationale**

People need to be aware of the energy to produce and the energy efficiency of as many of the items as we use to make rational and enlightened decisions. At his time much of the information is product advertisement driven. There are a number of possible groups that may have or regulate

information but the effort is very much uncoordinated and confusing. The City of Regina provides access information and presenter formats to assist in citizens decisions.

### **Description**

Provide research information sources, list locations such as web sites, technical organizations, manufactures, suppliers, universities etc., and help in providing seminars, information at trade shows etc to bring the knowledge to members of the public.

### **Implementation**

**Timing:** The process could begin as soon as manpower is available to assemble the information.

**Duration:** This can be an ongoing program.

**Funding:** Funding needed would be for staff time and/or volunteer expenses. Some funding to pay trainers may be required. Booth fees in shows or malls, and demonstration space in City owned or leased facilities may be required.

**Partners:** Educational facilities, schools, technical schools, University; Product Suppliers; Technical organizations; Environment Canada – Environmental Choice Program; Canadian Global Change program; Natural Resources Canada; Canadian Energy Efficiency Centre

### **Potential Positive Results**

The more people are aware of the energy required to obtain or manufacture and use items, the more rational decisions they can make about energy use reduction obtain and using products.

### **Potential Negative Results**

At present no clear source appears evident to obtain and collate the information. The item may take considerable time and effort to find sources and keep the information up to date.

## **ACTION ITEM#18: EnviroTip Program**

### **Rationale**

An activity to inform the public as to how they can assist the goals of the Green Ribbon Committee by taking action accordingly.

### **Description**

There exists with the Energy Management Task Force, and other sources, lists of ideas that can be used to reduce green house gas emissions. The City of Regina should consolidate the content of such lists and develop a program which will encourage the use and implementation of those ideas.

### **Implementation**

**Timing:** Work to compile the lists can start at any time. Sorting and assigning the data to proposed uses will allow co-ordination with other Green Ribbon Committee activities as the program proceeds.

**Duration:** The use of this material will form parts of many other Green Ribbon Committee activities. It will therefore extend through the life of the Committee.

**Funding:** The assembly of the lists will take very little funding. Funding for the uses of the lists would be budgeted to the user activity.

**Partners:** Utilities; Government Agencies; Manufacturers; Energy Management Task Force; Educators; Architecture and Engineering Professional Associations

### **Potential Positive Results**

- The public's attention and co-operation will be obtained
- It will heighten the awareness and implementation of the City's Program initiatives
- It will encourage the development of other suggestions and ideas

### **Potential Negative Results**

There is a potential for misinformation. The work done on this item must be carefully reviewed for fact.

## **ACTION ITEM#19: Green Operations Seminar**

### **Rationale**

Much of the energy efficiency information distributed goes to the design community. Once a building is turned over to the owner very little if any of this material is passed from the designers to the owners. Therefore it does not reach the operating engineers. In the event that a 3<sup>rd</sup> party property manager is in place there is yet another blockage to the engineers receiving the data. Action is required to connect to the operating engineers with this information.

### **Description**

Design a 1-day seminar designed conduct to

- determine the best ways to get current information to operating engineers
- prioritize the information of interest
- bring on side suppliers of energy efficient equipment for ongoing participation
- interface the work with Provincial & Federal programs for support with funding, information and expertise partner with EMTF for delivery

### **Implementation**

**Timing:** This activity could start by soliciting partnerships at any time. It could develop into a series if the first take is good.

**Duration:** After assessments of the first venture, a decision as to whether to do more of the same would determine future plans.

**Funding:** Moneys may be available from Federal and provincial programs. City works in kind and facilities will compliment.

**Partners:** SaskPower; SaskEnergy; Office of Energy Efficiency; Natural Resources Canada; BOMA; ASHRAE

### **Potential Positive Results**

- Development of a sustainable working conduit of assistance to building engineers
- More efficient operations reducing energy consumption
- Establishment of a working communications system

- Building support for the work of the Green Ribbon Committee

### **Potential Negative Results**

None envisioned

## **ACTION ITEM#20: Collective Agreements**

### **Rationale**

Unions and employers engaged in contract bargaining seldom if ever give weight to energy efficiency in demands or settlements.

### **Description**

An example of this concern is when a contract calls for parking lot plug ins to be powered 24 hours per day 365 days of the year. It is generally accepted that a designed off on cycle system is sufficient to keep vehicles readily operable. This must be brought to the attention of those in a position to correct the problem so as to be environmentally responsible. The City should promote this with all parking lot operators and unions.

### **Implementation**

**Timing:** This requires a carefully prepared paper outlining and verifying the process and contribution to green house gas emission reduction.

Once ready a presentation should be widely circulated to all parking lot operators Unions and major employers.

**Duration:** Primarily this is a one shot project but consideration could be given to frequent reminders.

**Funding:** Funding will be required to cover the cost of preparation and distribution of the program material.

### **Potential Positive Results**

- Existing contracts could be looked at, and by agreement of the parties, retrofit of the affected lot could occur. Significant savings in electricity could be achieved. Any savings would contribute to the cause of energy efficiency
- While there would be a monetary saving to the employer there would be no cost to the union

### **Potential Negative Results**

There will be a cost to the employer to retrofit the wiring to the parking facility however it will pay back in savings over time.

## **OTHER ACTION ITEMS**

The Industrial/Commercial/Institutional Subcommittee is interested in seeing the following recommendations periodically reviewed and possibly pursued in the future

- Create a property tax credit for C2000 buildings to encourage conservation

- Sponsor a web-based program to link to all major energy efficiency manufacturers, consultants, ESCos, designers and other suppliers of relative products, processes or services and make available through the City of Regina web site
- Recommend that the City of Regina establish a carbon credit based assessment system to encourage energy efficient developments
- Form a resource directory database. Give all building owners a list/database of energy related resources: consulting firms, engineers, architects, etc.
- A formula should be developed for calculating/accounting for a ton of carbon.
- Contact Rick McKenzie at NRCAN for update on their 12-month program to identify possible interfaces
- The City should develop an energy incentive program to provide economic assistance to new building developers
- Encourage provincial professional design associations to encourage professional re-education of their professionals to keep abreast of greenhouse gas emission reduction potentials
- Conduct seminars on Interest Based Bargaining within the ICI community with a goal of encouraging the implementation of energy efficient programs and measures
- Amend the zoning bylaw to reduce mandatory parking requirements and give assessment credits for provision of mass transit facilities
- Search out data on embodied energy relative to the environmental costs of replacement and make available to designers, developers, builders and others in order to promote “smart building” and renovating options
- Develop a *Reduce Greenhouse Gas Day*. Invite everyone in Regina to take action to reduce emissions and to report what done. Prizes to be gathered from corporate sponsors, judges to be solicited from University Engineering Program preparation by EMTF. Publicity by communications committee. Use CBC leader and Radio Stations. Mayor to announce day. Use open live shows and media interviews

## APPENDIX 4      TRANSPORTATION SUB COMMITTEE ACTION PLAN

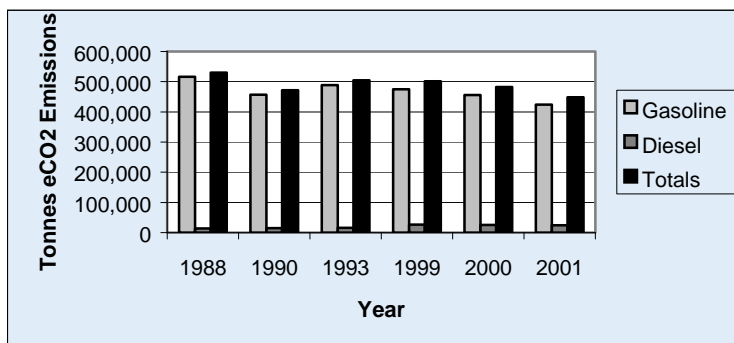
### Introduction

Of all the opportunities citizens of the City of Regina have to reduce their greenhouse gas emissions, the use of their private vehicles probably is one of the more significant where reductions can be made.

How vehicles are used to move people and goods around the City can be more efficient, and there are alternatives available. Examples include using City buses to move people, such as commuters, into and out of the downtown core on a regular basis, and better traffic control to eliminate unnecessary idling at high volume intersections such as those found along Victoria Avenue.

A number of actions have been developed to address four key issues, including reducing commuter traffic to high traffic density areas, improved traffic efficiency, improved vehicle efficiency, and climate change initiative funding. These recommended actions will have varying degrees of impact, and certainly have varying degrees of financial commitment associated with them for implementation. For example, development of a sophisticated new traffic control system for the City will be in the order of millions of dollars, as opposed to altering quitting times for employees of major employers, which should have minimal expense associated with it.

Monitoring the expected reduction in gas sales within the City, and reducing traffic congestion on the City's streets and roads are significant recommended actions. However, aside from the recommended actions and monitoring that will be required; more important will be the willingness of the City residents and transportation users to accept the necessary changes, and perhaps the way they conduct their lives and business within the City of Regina, is even more important.



**Figure 14: Emissions from gasoline and diesel consumption in transportation sector**

Unrelated to the traffic issues at hand to reduce greenhouse gas emissions, but directly responsible in part for the amount emitted, is the growing geographical dimensions of the City, and the desire by people working in the City to live outside the boundaries of the City. The City will need to focus on containing its size, and building a more efficient city. This would attract people working in the city who live outside of it, to live in it again.

### RECOMMENDATIONS

## **OBJECTIVE #1 - Reduce Commuter Traffic to High Traffic Density Areas**

**Rationale:** Single passenger commuter traffic to the Downtown Business District (estimated to be 181,600 vehicles trips per day) represents the largest single contribution to GHG emissions from vehicular use in Regina. A 10% reduction in the number of commuter trips to the Downtown Business District would contribute significantly to an overall reduction in GHG emissions in the City of Regina.

**PROS:** The proposals identified will develop information used to support alternative transportation methods or actively promote alternative transportation methods that directly impact the rate and volume of commuter traffic to high traffic density areas (Downtown Business District, University).

**CONS:** Some alternative transportation methods (i.e. cycling) are not feasible year round and will have to be supplemented in inclement weather. Increased bus use may require expansion of the existing bus fleet or modifications to the scheduling in place.

**Issues:** When one looks at the pros and cons above, clearly there is agreement in that alternatives are required to what currently exists, and many people are taking advantage of those alternatives, even in winter. However, one aspect that needs to be overcome is the attitude that “I cannot do without my car”. In some instances this will be true. For others, doing without a car on a regular basis merely requires a rethinking of how they will move about the city. Reasonable alternatives are car pooling, public transit, or working from home.

Clearly, education will be the key to the success of attitudinal change as Regina citizens embrace change with its inherent benefits.

### **Recommendation:**

**Survey downtown workforce to evaluate traffic patterns and potential for change.**

**Background/Details:** More information is required to assess commuter traffic patterns in downtown Regina and to determine the potential to modify existing patterns to support the development of new patterns that promote green initiatives.

**PROS:** Surveys would provide information to more accurately assess problem areas and potential solutions.

Surveys would indirectly inform participants of initiatives being examined and publicize the issues.

**CONS:** Costs and logistics could be prohibitive. Design and Analysis of surveys would have to be developed to ensure useful data.

### **Recommendation:**

**Develop an effective carpooling program**

**Background/Details:** A registry of car pool users would be developed with the benefit of preferred and lower rate parking for registered car pool users at city owned or operated parking facilities, and with corporate support, at various commercial parking facilities.

**PROS:** Financial incentives would encourage car pooling and reduce traffic congestion and associated problems.

**CONS:** Costs to supplement parking fees must be picked up by corporate sponsors.

**Issues:** The value of car pooling could be demonstrated by a reduction in the number of vehicles on the road. This concept of sharing private transportation will require attitudinal change by adjusting scheduling needs and convenience needs.

**Recommendation:**

**Modify transit services in the Downtown Business District.**

**Background/Details:** One alternative under consideration would be the development of low cost parking facilities at the perimeter of the Downtown Business District with low fare (or free) transit service from those locations to the Downtown core. While not eliminating commuter traffic, a reduction in trip length will make a positive contribution to the reduction of GHG emissions

**PROS:** Reduction of GHG emissions in downtown core area

**CONS:** Costs to subsidize parking; Resistance of commuters to park away from offices; Cost of subsidizing bus service

**Issues:** As identified above, parking away from one's place of business may be problematic. Some organisations may see this as an opportunity to be a good corporate citizen by subsidising the transit system, either in the downtown core or city wide, to obtain carbon dioxide credits, thereby offsetting more costly carbon dioxide controls elsewhere.

**Recommendation:**

**Promote alternate means of transportation in the Downtown Business Zone. Endorse any expansion plans for a bicycle lane network and secure bicycle parking in the Downtown Core Area.**

**Background/Details:** The City of Regina already has a Bicycle Advisory Committee which is used to enhance the opportunities for cyclists in the City by recommending changes to by-laws, new infrastructure to accommodate cyclists, and education. With an added emphasis to reduce GHG emissions, the role of this committee will be all that more important, and its work expedited.

**PROS:** More bicycles on the City's streets reduce GHG emissions by the elimination of one motor vehicle, and fewer vehicles reduce traffic congestion which contributes to GHG emissions. Further, personal health will improve as people become more fit.

**CONS:** Concern over personal safety will be a factor, as will the lack of convenience. Further, inclement weather such as rain, snow, ice and cold will deter some potential cyclists from becoming involved.

**Issues:** The City will need to further expand its cycling opportunities so as to eliminate traffic hazards between motorized vehicles and bicycles, as well as consider enhancing maintenance of roads during the winter to ensure a passage free way for both cyclists and motorists. Bicycles, accessories and clothing have developed considerably over the last decade, which should improve the take up of this alternative transportation mode. Further, employers will need to provide adequate designated parking space and change facilities.

### **Recommendation:**

**Develop a pilot project for a direct route commuter bus system in northwest Regina. By replacing single occupant vehicles with high occupancy transit, GHG emissions will be reduced and transportation efficiency increased.**

**Background/Details:** To reduce GHG emissions due to heavy commuter traffic moving into downtown business core, direct run, peak period, bus service from outlying collection areas to core business area

- Bus service at 15 minute intervals from 0630 to 0730 directional from residential collector area to downtown business core and from 1630 to 1830 directional from downtown business core to residential collector area. By replacing single occupancy commuter vehicles with high occupancy transit, GHG emissions will be reduced and transportation efficiency increased
- A mall parking area acts as collector point for residents of the northwest zone. Residents drive or walk to the mall parking area and catch a non-stop bus that will follow designated bus lanes to drop off points at the South and North sides of Victoria Park. Buses run every 15 minutes from the NW to the core during the morning rush period and cycle back for 3 runs per bus. The route is reversed during the afternoon/evening peak
- As an introductory strategy, all residents in the catchments area will be mailed an information package and a 1-month pass for the designated bus route in order to establish a pattern of ridership and develop habits in the target population. After a pattern is established a monthly fee (cost recovery) could be charged to users
- Businesses in the mall should be contacted and encouraged to participate. Excess traffic due to people parking their vehicle waiting for bus pickup or returning to their vehicles at night could result in extra customer traffic for local business as people buy a coffee on their way in or pick up a 'couple of things' on their way home. If this could be documented, the mall or businesses could be approached to cost-share a parking attendant for security in exchange for the increase in customer traffic

### **Future Enhancements:**

- Conversion of city buses to 'green' fuels further reducing GHG
- Development/Modification of areas for commuter origin parking (could act as spur for redevelopment of malls)
- Conversion of downtown parking to green space (as parking requirements decrease and costs increase due to negative taxation)
- Locate collection areas to provide 20 minute walk to 80% of participants
- Combine with staggered start times to improve bus utilization
- Eventually convert downtown core to 'public transit only' zone

**PROS:**

- Reduced traffic at peak periods (reduce dwell times, reduced congestion) can be utilized as development tool by city – encourage residential development around origin
- Fuel efficiency increase through multi-passenger vehicles (buses)
- May encourage percentage of riders to walk/cycle to origin (no vehicle use)
- Better utilization of buses
- Provides viable, attractive alternative to compensate for ‘negative reinforcement’ policies discouraging single car commuters
- Congestion of main routes from origin area would encourage alternate modes if it were demonstrated to retain sufficient convenience

**CONS:**

- Congestion at origin parking (not as bad as downtown congestion)
- Possible negative impact on parking area (reduction) for mall customers (may be compensated by increased traffic through mall)
- May be difficult to encourage modal shift (could be countered by negative incentives such as increased parking fees downtown)
- Majority of traffic originating in origin area may not be destined for downtown locations that would reduce potential use of program

**Issues:** High demand for bus transportation during peak periods could possibly be satisfied by making arrangements with STC to lease intercity buses during peak hours (could also look at school buses, which would be in use later and earlier than projected peaks)

**Recommendation:**

**Create partnerships between traffic generators and transit system to defray costs of operating mass transit in exchange for credit for emission reductions.**

**Background/Details:** Invite major traffic generator and business such as SaskPower to partner with City to sponsor bus routes in exchange for carbon credits.

**PROS:** Reducing overall GHG emissions by encouraging transit use and benefits business by reducing requirement to buy carbon credits.

**CONS:** Business may not see benefit at present until carbon credit system is brought in.

**OBJECTIVE #2 – Discourage Single Occupancy Use of Commuter Vehicles by Reducing Availability or Increasing Cost of Long-Term Parking**

**Rationale:**

Single passenger commuter traffic to high density destination areas (such as Downtown or the University) would be discouraged by reducing available low cost, long term parking available at those destinations. The current parking situation in downtown and at the university provides relatively inexpensive and plentiful long term (i.e. 8 hrs) parking; this encourages people to use their own vehicles for the convenience and comfort of having those vehicles readily accessible. If parking were more expensive or difficult, people spending the workday at the destination

would be more likely to car pool or use mass transit which would result in a reduction in number of vehicles and traffic congestion, thereby reducing GHG emissions.

**PROS:** The proposals will discourage commuters from bringing single occupancy vehicles to work by increasing costs of parking or reducing availability of long term parking this will directly impact on GHG emissions.

**CONS:** A parking rate structure must be developed to accommodate the short stay business visitor and shopper to the Downtown Core, as well as provisions for preferred parking for new residential development in the Downtown Area.

**Issues:** Modifications to the current system of Downtown Parking must be supplemented with improved access to transit services and all expansion of the indoor pedestrian walkway system in the Downtown Core Area.

**Recommendation:**

**Create a "Regina Parking Authority" to control and monitor parking in the downtown core.**

**Background/Details:** Regina commuters enjoy easy access to inexpensive parking (based on a comparison to other major Canadian Urban Centres). A parking authority would be created with mandate to administer the maintenance operation and management of city owned and operated parking lots and on-street parking meters, as well as serving as the authority for the review and approval of commercial parking facilities in the Downtown Business District (including a minimum parking fee schedule for weekly, monthly, or annual parking facilities) The parking authority would not be responsible for the administration or prosecution of parking fines.

**PROS:** By monitoring and controlling the number and use of long term parking spots, better controls can be put in place to discourage single passenger commuter vehicles and encourage more efficient transportation.

**CONS:** Cost of implementation.

**Recommendation:**

**Modify the current policies on parking requirements for new development in the Downtown Business District**

**Background/Details:** The ease of access to parking in the Downtown Zone is in part a result of current parking requirements, and a reduction in parking would result in premium rates for the parking provided. The committee recommends a \_\_\_% reduction in the current parking requirement in the Downtown Zone.

**PROS:** Reduction in downtown traffic congestion and consequent GHG concentrations

**CONS:** Negative impact on downtown businesses due to lack of access

**Recommendation:**

**Adjust property tax assessed on surface parking in the Downtown Zone**

**Background/Details:** An increase in taxation rates would have a direct impact on parking rates charged and the rate at which developable land is converted to excess surface parking.

**PROS:** Additional income will be available if number of spaces does not decrease. Raise in parking rates as costs are passed on to consumers will reduce attractiveness of using single passenger commuter vehicles.

**CONS:** Expect resistance from owners of parking facilities.

### **OBJECTIVE #3 – Improve Traffic Efficiency**

**Rationale:** Traffic efficiency plays a significant role in green house gas emissions. Vehicles that are not moving but have their engines running, are contributing to GHG emissions in the City. This is not to say that vehicles that are moving do not contribute to GHG emissions, however, efficiently moving people and material goods around the City by minimizing GHG emissions by reducing idling times for warming up, stoppage at traffic lights etc. is the objective of this Action Item. In order to reduce the GHG emissions from inefficiently moving vehicles, the following actions are recommended.

**PROS:** Reductions in traffic delays reduces GHG emissions and concentrations of substances that contribute to urban smog. Increased traffic efficiency also relieves stress for drivers.

**CONS:** May be resistance to enforcing changes on driving habits  
Initial costs of upgrades required to enhance traffic efficiency.

**Issues:** Although the costs of upgrades may be significant, as traffic efficiency and movement improves, drivers' attitudes will change with respect to changing their habits to further reduce GHG emissions and other emissions which contribute negatively to urban air quality.

#### **Recommendation:** **Implement and support Flex Time working hours.**

**Background/Details:** To reduce traffic congestion, particularly at typical "rush hour periods", corporations and other large "people based centres" (PBC) should be encouraged to support flex time for employees and others (e.g. students). This would provide two opportunities to reduce traffic congestion. In the first instance, it would allow individuals to find their own ideal times to arrive at or leave the workplace, depending on traffic congestion or personal needs. The second option would be to negotiate with the centres, such as SaskPower, SaskTel or schools, different starting and closing times, thereby eliminating large numbers of employees (students) from being on the street at the same time, thus reducing traffic congestion.

**PROS:** This would reduce the number of vehicles on the street and hence congestion, and idling times and reduced GHG emissions as vehicles need less time to clear intersections. Travel times to and from the PBC's would be significantly reduced. Frustration levels and "road rage" would be reduced.

**CONS:** PBC's administrators may be reluctant to have different starting times for some currently unknown reason. There may be a need to keep the same opening and closing times for like-minded organizations (schools). The public may not want their major businesses (e.g. SaskPower & SaskTel) opening and closing at different times.

**Recommendation:**  
**Encourage Work from Home Arrangements.**

**Background/Details:** Working from home utilizing remote access to work files and computers will greatly diminish the need to have people in vehicles traveling to and from work at peak times, or any time during the day, thereby reducing GHG emissions totally, not just those associated with the inefficient movement of vehicles at peak times. Further, those vehicles not on the roads will allow for greater efficiency of those remaining on the roads to move more efficiently.

It is recommended that larger employers be surveyed to determine the acceptability of this possibility.

**PROS:** Not only would the number of vehicles on the road be reduced, the GHG emissions from vehicles not being on the road would be reduced totally, and vehicles on the road could travel more efficiently because of reduced congestion, and further reduce their GHG emissions.

**CONS:** None with regards to this report.

**Recommendation:**  
**Promote Regina as an "Idling Free Zone".**

**Background/Details:** Both private and public vehicle owners need to be encouraged to only idle their vehicles for warming up the vehicle for a short period only. This promotion would identify the amounts of GHG emission from idling vehicles, wastage of fuel, and wear and tear on car engines. This would also include the use of timers for block heaters for a maximum of four hours before actually starting on cold mornings (-18C?) Further, the use of remote starters should be discouraged, as they tend to support long idling periods, to ensure a warm vehicle for people to enter.

**PROS:** Promoting an awareness and education about "idling" would not necessarily guarantee that GHG emissions were reduced, but would certainly go a long way towards alerting the populace of the City's goals, and would be reflected in reduced fuel consumption.

**CONS:** Many people would object to not being allowed to idle their vehicles, and hence, being allowed to get into a warm car.

**Recommendation:**  
**Upgrade Traffic Control System.**

**Background/Details:** An outdated traffic system contributes to the inefficient movement of vehicles around the City, and increases idling times at controlled intersections, even during low or moderate traffic volume periods. A "smart system" which senses traffic volumes and the presence of traffic should be implemented City wide. The current pilot system being tested on Victoria Avenue between Park Street and Prince of Wales Drive, if successful, should be implemented across the City as soon as fiscally possible. The "smart system" would include, but

not limited to sensing volumes of traffic, number of vehicles waiting, after hour modifications etc.

**PROS:** As stated previously under “flex time” alternatives, the amount of time in which vehicles are idling, or standing idle at intersection waiting to clear the intersection, either because of opposing traffic or signals, will be reduced. This will reduce GHG emissions, road rage, frustration, and travelling time.

**CONS:** Cost and implementation

**Recommendation:**  
**Enforce existing traffic and parking by-laws.**

**Background/Details:** Currently by-laws exist which enhance traffic flow by reducing restrictions to traffic at peak times. These include such things as bus only lanes, parking restrictions, speed limits etc. Enforcement of the by-laws through ticketing and tow-away would go towards reducing traffic congestion and increased idling times because of the congestion.

**PROS:** By enforcing the by-laws noted above, GHG emissions would not be exacerbated by poor traffic flows due to congestion caused by speeding vehicles, illegally parked vehicles, or disruption to the public transit system.

**CONS:** Enforcement of the by-laws does not have the same priority due to lack of financial resources as other police matters, such as serious vehicular traffic accidents, crimes against individuals and robberies to cite a few examples.

**Recommendation:**  
**Control Routing of Vehicles to and from major traffic generators**

**Background/Details:** Routing of vehicles for specific functions and or events provides for more efficient traffic flow and safety. For example, the current dangerous and hazardous routes ensures that vehicles using the City’s streets and roads are on roads that have the ability to carry the loads, away from more heavily traveled routes etc. Currently the City is identifying routes more amenable for bicycles because they will not disrupt traffic, and are safer. Routing of specific vehicles away from major vehicular routes within the city is recommended, particularly heavy traffic areas, such as Victoria Avenue and the Ring Road. Efforts must be made to encourage the Provincial Highways Department to provide a by-pass east of the City.

**PROS:** This will alleviate much of the congestion on the heavily used east-west Victoria Avenue, and the congestion and non-movement of vehicles at the Ring Road and Victoria Avenue; notably the west-bound turn lane onto the Ring Road.

**CONS:** Costs and time needed to implement.

**Recommendation:**  
**Develop and implement plans for traffic accommodation for City activities at peak times.**

**Background/Details:** Often movement of vehicles to and from city events conflict with movement of normal traffic volumes, and add to the congestion in different parts of the City. Further, the movement of vehicles often conflict with train movements within the City, as the tracks of the major railways go through the part of town where many of the City's big event venues (Agridome, Taylor Field, and Fieldhouse) take place.

It is recommended that discussions take place with the railways to time their train movements accordingly; or in the longer term, the City make provision for easier access to and from the venues; either through increased public access at these required times, or infrastructure improvements to accommodate vehicular traffic, even during train movements through the City.

**PROS:** The improvement of vehicular traffic during City events would be greatly enhanced if the recommendations above would be implemented, first by reducing the number of vehicles on the road through provision of increased public transit, and improved movement of vehicles in and around railway tracks

**CONS:** Cost and implementation

### **Recommendation:**

#### **Reduce/Eliminate Traffic Delays at Railway Crossings.**

**Background/Details:** The movement of vehicles often conflict with train movements within the City, as the tracks of the major railways go through the part of town where many of the City's big event venues (Agridome, Taylor Field, and Fieldhouse) take place.

**PROS:** Reduce idling time and consequent emission levels.

**CONS:** Scheduling of trains is not subject to city administration – railways may not be able to or wish to comply with requests by the city to reschedule trains.

### **Recommendation:**

#### **Provide Education to encourage alternative transportation.**

**Background/Details:** People need to understand the benefits of NOT taking the car and that doing something different like riding a bike or car pooling is an acceptable thing to do. In other words, people have to change attitudes. People need to understand that the City is not going to make it easier to move around the city using a personal vehicle. New roads will not be built to ease congestion, nor will new parking stalls be developed.

An education program needs to educate people why the use alternative forms of transportation is desirable, and it will in fact make their movement through the City an enjoyable experience, healthy, and environmentally responsible.

City and corporate leaders need to lead the way as to the use of transportation other than the one individual in one vehicle.

**PROS:** The number of vehicles on the road will be reduced, and those that are, given the recommendations above, will find it more efficient to move through the City on any given day or time.

**CONS:** People will naturally view the restricted use of their vehicle at a time and place of their choosing as an infringement of their rights. Politically this will not be seen as desirable by City Council.

## **OBJECTIVE #4 – Vehicle Efficiency**

**Rationale:** Vehicle efficiency plays a significant role in green house gas emissions. Improperly tuned and maintained vehicles can substantively increase green house gas emissions. Environment Canada estimates that there are 10,000 to 12,000 older, poorly maintained vehicles in the City of Regina.

These vehicles account for as much as 16% of the GHG emissions from the transportation sector or over 9000 tonnes of emissions. By reducing these emissions by one third, the entire GHG target reductions for the transportation sector could be reached.

**PROS:** More efficient vehicles will result in reduced GHG emissions and lower fuel costs for users.

**CONS:** Costs associated with improving efficiency may be greater than perceived benefit to consumers, thereby discouraging the vehicle owner from undertaking required upgrades.

**Issues:** Education about improved vehicle efficiency will go a long way towards upgrading vehicles and saving money in the long run for vehicle owners. Further, “buy back” programs in other centres to remove polluting vehicles from urban centres have proven successful. Should fund raising programs through green taxes prove successful, these funds could be used to underwrite the program mentioned above.

### **Recommendation: Implement mandatory Vehicle Emission Testing.**

**Background/Details:** All vehicles registered to a Regina address would be subject to mandatory emission testing and repair of deficiencies noted during the testing. These tests would be required once every three years and would require the vehicle to meet the emission standards for the make model and year of vehicle. All deficiencies would be required to be corrected within a six month time period.

This program would be phased in with the first two years of testing and repair being completed on a voluntary basis. After this grace period, the mandatory test/repair component would come into force.

**PROS:** The mandatory testing of vehicles would guarantee that vehicle efficiencies were maintained and would guarantee that ghg emissions were reduced. Applied to trucks this would also reduce other pollutants from their operation. This program also ensures that motorists are using less fuel and therefore, saving associated fuel costs.

**CONS:** The program could hurt lower income families and the elderly on fixed income. The phase in period is designed to help ease this concern, giving low income families two years to respond to any significant problems. It should be noted that most vehicle costs identified by the City's current voluntary program are small five or ten dollar items.

### **Recommendation: Improve City Fleet Maintenance.**

**Background/Details:** The City of Regina should show leadership by ensuring that their vehicle fleet is maintained in good mechanical repair. The fleet should be inspected on a yearly basis and the results of the inspections included in the Cities annual environmental report. Including the amount of GHG emissions avoided.

**PROS:** It is important that the City demonstrate GHG improvements by its own leadership. This will also save the City costs on fuel.

**CONS:** The City may incur somewhat higher maintenance costs.

**Recommendation:**  
**Increase Corporate Fleet efficiency.**

**Background/Details:** The City should develop the Corporate GHG Challenge for large corporate fleets by working with the companies who have large fleets to provide City recognition of their success in reducing GHG emissions through their vehicle maintenance programs. This recognition could include a yearly challenge award. Letters of congratulations from the Mayor could be published in the newspaper, or other awards.

**PROS:** By working with industry in a proactive manner, emissions from the large number of trucks in the City can be reduced. Recognition of the industries involved is a positive approach to GHG reductions

**CONS:** Industry may not be interested or not see any advantage to such cooperation

**Recommendation:**  
**Develop and implement vehicle efficiency education programs.**

**Background/Details:** The public and industry need to be educated on the importance of vehicle efficiency as a method to reduce GHG. This program should the benefits of good vehicle maintenance and that much of the required maintenance is low cost and can be done as part of routine tune-ups.

**PROS:** People respond well to new concepts if they clearly understand the implications and advantages of the programs. Such education programs would help support the mandatory program and encourage people to be responsible citizens.

**CONS:** People are barraged with too many well intended education programs and will not respond favorably to another program.

**OBJECTIVE #5 – Generate Money to Fund Climate Change Initiatives in the City of Regina**

**Rationale:** Several of the initiatives proposed by the Transportation Subcommittee and the Green Ribbon Committee overall have a cost associated with them. Self-generating these funds through “green” initiatives helps to make the recommendations viable. As more climate change initiatives are identified (and the corresponding costs increase), the number and/or rate for each revenue generating idea can be adjusted to increase the level of revenue.

**PROS:** The proposals below seek to generate revenue from sources that are contributing to the problem. For example, individuals who drive vehicles (which contribute to the problem) pay fees or taxes that fund projects that help to fix the problem.

**CONS:** The tax rate is already high in Saskatchewan and adding additional taxes or fees will not be well received by the general public.

**Issues:** The public must be made aware of the impact of global warming and how they are contributing to the problem. This awareness is important to gain support for the “not-so-popular” proposals identified below.

**Recommendation:**

**Apply an annual Vehicle “Green” Fee to all registered vehicles.**

**Background/Details:** Applying a fixed annual fee to the approximately 140,000 vehicles registered within the city (applied as a “green” fee during the annual registration renewal process) would generate dollars to be used to fund climate change initiatives in the City of Regina.

**PROS:** Vehicle use in the City of Regina contributes to the climate change problem by emitting carbon monoxide and other harmful gases into the atmosphere. Applying an annual fee would generate money to fund climate change initiatives in the City of Regina.

**CONS:** Additional new registration fees may not be well received by the public.

**Recommendation:**

**Lobby or partner with the province to apply Vehicle Use Fee, based on kilometres driven in a year, to generate dollars to be used to fund climate change initiatives.**

**Background/Details:** Applying a “user fee” to vehicles within the city based on kilometres driven in a year (applied as a registration fee during annual registration renewal) would generate dollars to be used to fund climate change initiatives in the City of Regina.

**PROS:** Vehicle use in the City of Regina contributes to the climate change problem by emitting carbon monoxide and other harmful gases into the atmosphere. Applying a fee based on the number of kilometres driven would generate money to help mitigate the problem from consumers contributing the most to the problem (i.e. the more kilometres you drive, the more you contribute to mitigation effort).

**CONS:** New fees based on kilometers driven may be difficult to administer and may not be well received by the public

**Recommendation:**

**Apply a 1 cent per litre tax on gas sold within the City of Regina.**

**Background/Details:** Applying a 1 cent per litre gas tax within the city limit would generate funds to be used to fund climate change initiatives in the City of Regina.

**PROS:** Vehicle use in the City of Regina contributes to the climate change problem by emitting carbon monoxide into the atmosphere. Applying a tax to gas would generate money to help mitigate the problem from consumers contributing to the problem (i.e. the more gas you consume, the more you contribute to the mitigation effort).

**CONS:** New taxes of any type are not well received by the public.